Capital Planning Initiative

2000-01

February 2001

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EXECUTIVE SUMMARY

Background

The government's 2000-2003 Business Plan includes the following goal:

> ***'Alberta will have effective and efficient infrastructure.'***

One of the strategies for achieving this goal is to:

> ***'implement initiatives to ensure effective and innovative capital planning and funding of government supported infrastructure through the Capital Planning Initiative.'***

The Capital Planning Initiative (CPI) for 2000-2001 ensures that the policies and frameworks that were established in 1999-2000 are effectively implemented for both government-owned infrastructure, and infrastructure that is financially supported by the provincial government, but is owned by boards, municipalities, and health authorities.

Strategies and Targets

The following strategies and targets were approved by the CPI Deputy Ministers Committee to address the government's infrastructure goals.

Strategy	Target/ Performance Indicators	Results
1. Support funding decisions with a **long-term capital plan** for both government-**owned and supported** infrastructure.	1a. Semi-annual Corporate Capital Overview to include five-year plan for **owned** and **supported** infrastructure to be submitted to Treasury Board by June 30 and November 30.	**Target Achieved** ❑ The Semi-annual Corporate Capital Overview was expanded to include a five-year plan for owned and supported infrastructure and was available for submission to Treasury Board by June 30 and November 30. The June Overview was provided to the Cabinet Retreat in July, 2000. The Overviews summarized current infrastructure responsibilities, planned spending, optimal spending, key business drivers, and performance information.
	1b. Monitor effectiveness of changes to budget policies and practices and identify any problems that arise. Propose potential solutions to identified problems in the November 30 Corporate Capital Overview.	**Target Achieved** ❑ Recommendations were made to increase the consistency of infrastructure funding arrangements with supported organizations. These recommendations are included as Attachment 1 to the Executive Summary.
2. Implement effective, independently verifiable infrastructure management systems (IMS) and common key performance measures for **owned** infrastructure to improve planning and priority setting.	2a. Over 85% of **owned** infrastructure to be supported by a substantially developed IMS by March 31, 2001.	**Target Achieved** ❑ Development of the Environment Infrastructure Management System (EIMS) will be completed by March 31, 2001, resulting in over 85% of owned infrastructure being supported by a substantially developed IMS.
	2b. Establish baseline data for three measures for each category of **owned** infrastructure by March 31, 2001.	**Target Achieved** ❑ Performance measurement data for buildings, transportation infrastructure and water management infrastructure was established in 1999/2000 and continues to be updated and expanded. See Attachment 2 for the results for 2000-01. ❑ Initial scope and methodology for establishing baseline data collection has been developed for collections, exhibits and interpretive display infrastructure.

Strategy	Target/ Performance Indicators	Results
	2c. Initiate implementation of a strategy for developing common infrastructure management systems for each category of **owned** infrastructure by March 31, 2001.	**Target Achieved** ❑ Four categories of **owned** infrastructure have been identified. A common IMS has been reviewed and recommended for each of these four categories. The four common IMS's are TIMS for transportation infrastructure, BLIMS for buildings and land infrastructure, EIMS for water management infrastructure and CEIMS for collections and exhibit infrastructure. ■ The development of TIMS is on schedule. Data modeling enhancement is underway and will be completed by March 31, 2001. Road signage data relating to cultural and historical sites has been incorporated in TIMS. ■ A review of all existing buildings and land related IMS has been completed. A plan to replace existing systems with an integrated system (BLIMS) was approved. The selection of a software package(s) for inventory management, planning, lease management and evaluation components will be completed by March 31, 2001. ■ System development for EIMS will be substantially completed by March 31, 2001. ■ Recommendation to consolidate different collection management systems into one common IMS for all collections and exhibits was endorsed. ❑ A plan and schedule for developing detailed specifications for the enterprise architecture in 2001-2002 have been completed. These specifications will be used on a continuous basis to develop and/or enhance the four common IMS. See Attachment 3 for an overall view of the Enterprise Architecture Framework and the IMS Initiatives. ❑ Joint discussions and meetings with the Strategy 3 Task Group on IMS for **supported** infrastructure have taken place to ensure that the systems for owned infrastructure will, as much as possible, accommodate the requirements for supported infrastructure. ❑ Consultations with the Office of the Chief Information Officer (CIO) have taken place to ensure the Enterprise Architecture Framework for IMS will be aligned with the provincial government's Strategic Direction for Information and Technology Management.

Strategy	Target/ Performance Indicators	Results
3. Develop a strategy for design and implementation of an IMS for **supported** infrastructure.	3a. Identify current IMS systems that exist for **supported** infrastructure by March 31, 2001.	**Target Achieved** ❑ The current IMS systems that exist within each provincial department for supported infrastructure have been identified. These systems capture the majority of data for supported infrastructure with the exception of municipally-owned infrastructure. ❑ The primary municipal infrastructure management systems are being identified as part of Phase 1 of the Municipal Infrastructure Management System (MIMS) project.
	3b. Develop and initiate implementation of a strategy for collection of baseline data for **supported** infrastructure by December 31, 2000.	**Target Achieved** ❑ Recommendations on a strategy to collect baseline data for municipal infrastructure will be developed as part of Phase 1 of the Municipal Infrastructure Management System project. ❑ The baseline data on all the other significant areas of supported infrastructure has either been collected or will be collected by the responsible departments. Attachment 4 provides details of the status of data collection. Each department has a strategy in place to collect the remaining required baseline data.
4. Ensure effective, innovative management of physical infrastructure	Identify opportunities for, and encourage, private sector provision of physical infrastructure and related services where necessary criteria are met.	**Target Achieved** ❑ Examined the extent and nature of private sector provision of infrastructure and related services across infrastructure types in the Alberta Government. ❑ Reviewed the experience of other Canadian jurisdictions with P3s and Alternative Service Delivery, and identified the key success factors to encourage and support these initiatives. ❑ Recommended a strategy which would establish goals and a framework to encourage and support P3 or Alternative Service Delivery initiatives.
5. Divest properties that are no longer required for government programs	$35 million of surplus properties are sold at fair market value by March 31, 2001.	**Target Achieved** ❑ Property sales of $35 million will be achieved. ❑ Several underutilized facilities were evaluated for alternate use.

Next Steps

In order to realize the benefits of the work completed through this initiative, the following initiatives will be continued in 2001-2002.

Funding

- Continue to provide Corporate Capital Overviews to decision-makers at the beginning and end of the budget/business planning cycle.
- Review the prioritization process for major capital in other jurisdictions.
- Follow-up and report on implementation of Comparative Business Practices recommendations.

Performance Measures

- Monitor collection of performance data for owned and supported infrastructure.

IMS Development

- Develop and maintain detailed specifications and guidelines for the enterprise architecture.
- Monitor development of BLIMS, TIMS, EIMS, CEIMS, and MIMS.

Public-Private Partnerships/Alternative Service Delivery Process

- Develop guidelines for government departments, health authorities, school boards, and others, as to the decision-making framework for consideration of Alternative Service Delivery (ASD) proposals.
- Report on ASD initiatives undertaken in 2001-02.

Conclusion

This phase of the Capital Planning Initiative is critical to the development of long-term planning and information systems to support funding decisions for the government's owned and supported infrastructure. The results of the 2000-2001 Capital Planning Initiative will:

- improve the information on physical infrastructure provided to decision-makers,
- ensure that performance measures are used and applied consistently across all types of owned infrastructure,
- ensure a common approach for development of IMS for government-owned infrastructure,
- assist supported agencies with the development of infrastructure management systems,
- assist government departments and partners with the evaluation of opportunities for private sector provision of infrastructure, and
- divest surplus properties.

Attachments

Attachment 1:	Funding Arrangements with Supported Organizations
Attachment 2:	Performance Measures - Owned Infrastructure
Attachment 3:	- Enterprise Architecture Framework - IMS Initiatives
Attachment 4:	Status of Performance Measure Data Collection – Supported Infrastructure

Attachment 1

Funding Arrangements with Supported Organizations
Overview of Findings[1]

Ongoing Relationship with Supported Organizations

Ministry	**Agriculture**	**Infrastructure**			
Infrastructure Type	Irrigation	Schools	Post-Secondary	Health Care	Municipal
Funding Proportion	Partial	100%	Partial	100%	Partial
GST	Exempt	**Eligible cost**	**Eligible cost**	Exempt / ineligible cost	Ineligible cost
Funding Method	Advanced	Advanced	Advanced	Advanced	Advanced
Banking	Own account	Own account	Own account	**CCITF** [2]	Own account
Interest Earned	Retained	Retained	Retained	**Returned**	Retained
Surplus Funds	Retained	Retained	No surplus	**Returned**	Retained
Financial Audit	Financial Statements audit	Financial Statements audit	Financial Statements audit	**Separate audit**	Financial Statements audit
Disposal	No ownership rights	Approval required	Approval required	Approval required	Approval required

Ad Hoc Relationship with Supported Organizations

Ministry	**Community Development**	**Environment**		**Infrastructure**	**Municipal Affairs**
Infrastructure Type	Historical	Waste Mgmt. Assistance/ Resources Recovery Programs	Water Mgmt/Erosion Control	Seniors Lodges	Municipal 2000
Funding Proportion	Partial	Partial	Partial	100%	Partial
GST	Ineligible cost	Ineligible cost	Ineligible cost	Ineligible cost	**Eligible cost**
Funding Method	Reimbursed / advanced	Advanced	Reimbursed	Reimbursed	Advanced
Banking	Own account	Own account	Own account	Own account	Own account
Interest Earned	Retained	Retained	Returned	No interest	Retained
Surplus Funds	Retained	Returned	Returned	No surplus	Returned
Financial Audit	Separate audit	Separate audit	Separate audit	Province manages	Compliance form
Disposal	No ownership rights. Notification of change required.	Approval required	No ownership rights	Approval required	No ownership rights

1 Inconsistent practices are bolded (see Strategy 1 - Attachment 2 for details). All identified inconsistencies are being addressed.
2 Consolidated Cash Investment Trust Fund

Attachment 1

Funding Arrangements with Supported Organizations
Overview of Findings[1]

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2 Consolidated Cash Investment Trust Fund

Attachment 2

Performance Measures – Owned Infrastructure 2000-01

				Physical Condition	Utilization	Functional Adequacy
Category of Infrastructure	**Notes**	**Replacement Value ($ Million)**	**% of Total Infrastructure**	**% Rated as Acceptable**	**% Utilization within Target Capacity**	**% Providing Acceptable Service**
Buildings	*1*	4,541	15%	97%	90%	85%
Transportation	*2*	21,213	68%	94%	98%	87%
Water Management	*3*	4,300	14%	96%	98%	99%
Aggregated Infrastructure 2000-01	*4*	**30,054**	**96%**	**95%**	**97%**	**89%**
Aggregated Infrastructure 1999-00			**88%**	**94%**	**92%**	**87%**

1. The percentage of buildings rated as 'in acceptable physical condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life. The functional adequacy measure is improved from 1999-00 as a number of buildings that did not provide acceptable service have been disposed of.

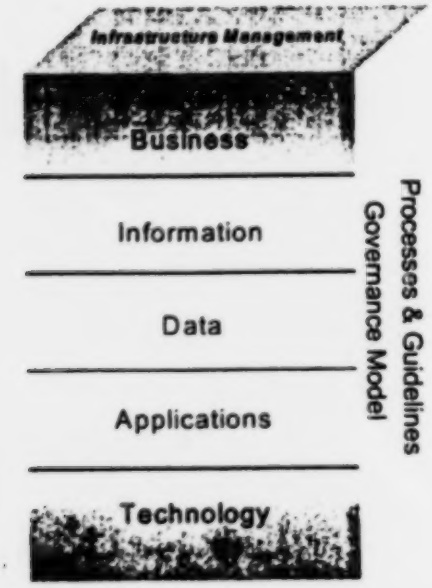
2. Functional Adequacy measure is being revised as a result of the addition of secondary highways and urban links to the Primary highway system. Measure is based on 1999-00 data.

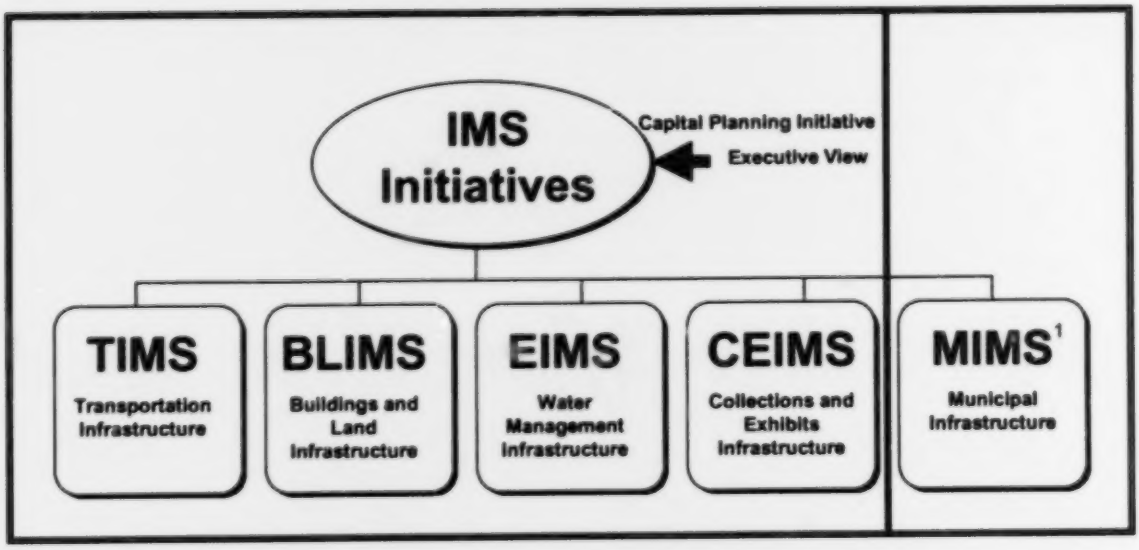
3. The Utilization measure excludes non-headworks water management infrastructure for which utilization is not a relevant measure.

4. Data is not available for natural heritage sites (parks), government-owned buildings less than 1000m^2, other roads and infrastructure, exhibits, and interpretive infrastructure.

Attachment 3

Enterprise Architecture Framework and IMS Initiatives





[1] MIMS will have a municipal focus that may lead to differences from the provincial systems

Attachment 4

Performance Measures
Status of Data Collection – Supported Infrastructure

Type of Infrastructure	Notes	Baseline Data Collected		
		Physical Condition	Utilization	Functional Adequacy
Irrigation		Partial	Yes	No
Schools		Yes	Yes	Partial
Post Secondary Institutions		Partial	Partial	No
Provincial highways in cities	1	Partial	No	No
Health Facilities		Yes	No	Yes
Social Housing		Partial	Partial	Partial
Designated Historic Sites		No	No	No
Water Management	2	No	No	No
Municipal Infrastructure		No	No	No

1. Utilization and functionality data collection to be combined with municipal infrastructure data collection.

2. The majority of water management infrastructure is government owned. The water management infrastructure in the above table applies only to the infrastructure in Special Areas and a few select municipalities.

Capital Planning Initiative - Team Members

Deputy Ministers Committee

Peter Kruselnicki, Deputy Provincial Treasurer
Ed McLellan, Deputy Minister, Infrastructure

Working Committee

Brian Marcotte, **Chair,** Infrastructure
Jay Ramotar, Infrastructure
Bob Smith, Infrastructure
Gary Boddez, Infrastructure
Ray Reshke, Infrastructure
Mike Mylod, Agriculture, Food and Rural Development
John Tackaberry, Agriculture, Food and Rural Development
Bruce Perry, Environment
Bill Byrne, Community Development
Brad Pickering, Municipal Affairs
Phil Gougeon, Learning
Duane Pyear, Economic Development
Ann Hammond, Treasury
Paul Pellis, Innovation and Science
Anne Givens, Health and Wellness

Working Committee Alternates and Subcommittee Members

Hoang Le, Infrastructure
Alec Waters, Infrastructure
Dan McCosh, Infrastructure
David McKay, Infrastructure
Debra Strutt, Infrastructure
Terry Bociurkiw, Infrastructure
Dave Frizell, Infrastructure
Winnie Yiu-Yeung, Infrastructure
Jane Stoeck, Infrastructure
David Bass, Infrastructure (Learning)
Susan Prediger, Infrastructure
John Prokopiw for Carol Trowsdale, Environment
Barry Hurndall, Environment
Bob Sharp, Environment
Brian Quickfall, Municipal Affairs
Steve MacDonald, Learning
Kent Jenkins, Learning
Steve Moran, Economic Development
Ram Rajendra, Municipal Affairs
Chris Parkins, Municipal Affairs
Janice Romanyshyn, Municipal Affairs
Larry Pearson, Community Development
Brian Breakey, Community Development
Robin Wigston, Community Development
Don Squire, Community Development
Stewart Boyd, Treasury
Blake Bartlett, Innovation and Science
Bob Thomas, Health and Wellness
Cathryn Landreth, Alberta Corporate Service Centre

Strategy 1

Funding

STRATEGY 1 - FUNDING

1. Introduction

Purpose

The Funding Task Group addressed the following CPI strategy:

> ***Support funding decisions with a long-term capital plan for both government owned and supported infrastructure.***

Specific targets for 2000-01 were:

- Semi-annual Corporate Capital Overview to include five-year plan for owned and supported infrastructure to be submitted to Treasury Board by June 30 and November 30.
- Monitor effectiveness of changes to budget policies and practices and identify any problems that arise. Propose potential solutions to identify problems in the November 30 Corporate Capital Overview.

Process

The following tasks and activities were completed:

Semi-annual Corporate Capital Overview

- A request for information was developed in co-ordination with the Capital Planning Working Committee in the Spring and Fall.
- The requested information was provided by ministries responsible for the various owned and supported infrastructure programs as part of the budgetary submissions to Treasury.
- Treasury prepared a draft report for review and comment by the Capital Planning Working Committee.
- Final reports were provided to decision-makers at the beginning and end of the annual budget/business plan cycle.
- The reports cover all years included in the business plans as well as two future years.

Budget Policies and Practices

- Working Committee members were asked to identify concerns resulting from current budget policies and practices.
- The Task Group discussed concerns identified by the Working Committee.
- The following issues were identified as areas for review and assigned to sub-groups for study:
  - presentation of one-time and accelerated funding in budget documents, and
  - variations in infrastructure-related funding arrangements with supported organizations.
- The results of the studies were discussed by the Task Group and recommendations were formulated.
- A draft report was reviewed and discussed by the Capital Planning Working Committee.
- The recommendations respecting variations in funding arrangements with supported organizations were accepted. The alternatives for presentation of one-time and accelerated funding in the budget documents is under review.

2. Budget Policies and Practices

2.1 Presentation of One time and Accelerated Funding in Budget Documents

Issue

Review the presentation of one-time and accelerated funding in budget documents and suggest alternatives that provide greater clarity and are more user-friendly.

Review Process

- Presentation of one-time and accelerated funding in Budget 2000 documents for the Ministries of Health and Wellness, Learning and Infrastructure was examined.
- The flow of information through the budget documents (e.g., Estimates, Ministry business plan and Ministry income statements) was considered.
- Various alternatives were developed for the Ministry of Infrastructure as an example.

Alternatives Considered

Following are alternative presentations that were considered. See Attachment 1 for mock-ups of the current Income Statement and Estimates presentation, based on Budget 2000 documents of the Ministry of Infrastructure. These mock-ups are for illustrative purposes only. The alternatives are under review.

Alternatives		Pros	Cons
1.	Status Quo	▪ Familiarity ▪ All funding for each element presented	▪ Significant variations in funding between years due to one time and accelerated funding is not explained
2.	Change Estimates		
a	Show one time and accelerated funding by element	▪ One time and accelerated funding shown by element	▪ Estimates become more complex ▪ Confusion may arise between funding sources (e.g., GRF, lotteries) and type of funding (e.g., base, one time) ▪ Limited to 3 years (i.e., budget, current and prior years)
b	Separate Operating and Capital	▪ Easier to trace funding in Estimates to Income Statement amounts	▪ Significant variations in funding between years due to one time and accelerated funding is not explained ▪ More difficult to see funding for each element ▪ Limited to 3 years

	Alternatives	Pros	Cons
3.	Change Income Statement		
a	Show one time and accelerated funding by element	▪ Facilitates comparison of funding across 5 years (i.e., 3 business plan, current and prior years) by element	▪ Amount of detail in the Income Statement
b	Summarize by sub-program or other aggregation	▪ Facilitates comparison of funding across 5 years by sub-program	▪ Less detail provided in Income Statement than current format
c	Separate Operating and one time and accelerated funding and summarize by sub-program or other aggregation	▪ Facilitates comparison of funding across 5 years by sub-program	▪ Less detail provided in Income Statement than current format
4.	Change Both		
	2b with 3b	▪ Easier to trace funding in Estimates to Income Statement amounts ▪ Facilitates comparison of funding across 5 years by sub-program	▪ More difficult to see all funding for each element

2.2 Funding Arrangements with Supported Organizations

Issue

Review various common components of infrastructure-related funding arrangements with supported organizations for consistency of treatment across government and suggest changes as necessary.

Review Process

- Treatment of the following common components of infrastructure-funding arrangements were included in the survey:
  - GST
  - Method of funding
  - Banking arrangements
  - Interest earned on project funds
  - Surplus funds at the completion of the project
  - Financial audit requirements
  - Disposition of property
- The Ministries of Agriculture, Food and Rural Development, Community Development, Environment, Infrastructure and Municipal Affairs were canvassed
- Responses were requested for each major type of infrastructure supported by the Ministry

Findings

- An overview of the findings is included on the following page. See Attachment 2 for details.
- In general, there is evidence of consistent treatment across ministries for most of the identified common components of the infrastructure-funding arrangements
- There is greater similarity between programs which are based on an ongoing relationship with the supported organization than for ad hoc or one-time programs.
- Following are the key inconsistent practices for programs based on an ongoing relationship between the province and supported organizations:
  a) Funding practices for health care facilities, including:
     - The use of the province's banking arrangements

- Interest earned on project funds is returned to the province
- Surplus project funds are returned to the province
- Requirement for a separate audit or reporting

b) Funding of school facilities on a pre-determined formula basis.

- The treatment of GST as an eligible cost for both schools and post-secondary institutions was also noted as an exception; however, since the province is the sole provider of funding for basic education, it is reasonable that the province would fund any GST not refunded by the federal government. For post-secondary facilities, since the province has provided only partial funding in the past, it could be argued that provincial funding is not used for GST. With recent changes to post-secondary project funding, the treatment of GST for these projects should be reviewed.
- The key exceptions for programs based on a one-time or ad hoc relationship between the province and the supported organization relate to the Municipal 2000 Sponsorship Program - GST as an eligible cost.

Table 1
Funding Arrangements with Supported Organizations
Overview of Findings[1]

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Disposal	No ownership rights	Approval required	Approval required	Approval required	Approval required

Ad Hoc Relationship with Supported Organizations

Ministry	**Community Development**	**Environment**		**Infrastructure**	**Municipal Affairs**
Infrastructure Type	Historical	Waste Mgmt. Assistance/ Resources Recovery Programs	Water Mgmt/Erosion Control	Seniors Lodges	Municipal 2000
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1 Inconsistent practices are bolded (see Strategy 1 - Attachment 2 for details). All identified inconsistencies are being addressed.

2 Consolidated Cash Investment Trust Fund

Recommendations

A. **Funding practices for health care facility projects should be reviewed by the Ministries of Infrastructure and Health and Wellness.**
It was noted that a revised policy for interest retention is being developed. This review should be expanded to include the treatment of surplus funds and use of the province's banking arrangements in conjunction with any new policy proposal. This review may also need to be expanded to consider the arrangements required for over $800 million of one-time infrastructure funding to be provided to regional health authorities in 2001-02

B. **Funding practices for school and post-secondary projects should be reviewed by the Ministries of Infrastructure and Learning.**
It was noted that a proposal to move to quarterly advance funding based on forecasted requirements is being considered. This review may need to be expanded to consider the arrangements required for $635 million of one-time infrastructure funding to be provided to school boards in 2000-01 and 2001-02. Recent decisions to provide greater portions of funding for post-secondary projects (e.g., up to 100%) will require the review of GST, interest and surplus retention and audit and reporting requirements.

C. **Inclusion of GST as an eligible cost for the Municipal 2000 Sponsorship Program should be revised by the Ministry of Municipal Affairs.**
This approach is not consistent with the province's policy on GST. This inconsistency is confusing to grant recipients, reduces funding available for other projects and may have implications on other GST matters. The Ministries of Infrastructure and Learning should also review the treatment of GST for post-secondary facility projects.

D. **Audit requirements for capital projects should be reviewed.**
Ministries should review the adequacy of financial statement audits to track the use of conditional grants, particularly where interest earned and surplus funds are retained by the organization for use on other approved projects. When separate compliance reports are required, the need for an audit should be considered. The degree of reporting could be related to the amount of provincial funding provided and other risks involved. For example, an audit report on compliance with grant conditions may be appropriate for large, multi-year, complex projects, while a review engagement report or statement of compliance report may be sufficient for smaller, short-term, standard projects.

Table 2
Current Presentation
Estimates

For Illustrative Purposes Only

INFRASTRUCTURE - *Continued*

PROGRAM 2 - CONSTRUCTION, UPGRADING AND OPERATION OF INFRASTRUCTURE

(thousand of dollars)

OPERATING EXPENSE AND CAPITAL INVESTMENT

Reference	Element	2000-01 Estimates Gross Expense	2000-01 Estimates Dedicated Revenue	2000-01 Estimates Net Expense	Comparable 1999-2000 Forecast Gross Expense	Comparable 1999-2000 Forecast Dedicated Revenue	Comparable 1999-2000 Forecast Net Expense	Gross Comparable 1999-2000 Budget
2.3	**Municipal Partnerships**							
2.3.1	Rural Transportation Partnerships	160,000	-	160,000	83,500	-	83,500	63,500
2.3.2	Resource Road/New Industry							
	- Operating Expense	30,000	-	30,000	20,000	-	20,000	20,000
	- Capital Investment	4,000	-	4,000	4,000	-	4,000	4,000
2.3.3	Alberta Cities Transportation Partnerships							
	- Operating Expense	256,300	-	256,300	428,000	-	428,000	113,000
	- Operating Expense funded by Lotteries	-	-		6,700	-	6,700	6,700
2.3.4	Streets Improvement Program	60,000	-	60,000	27,000	-	27,000	12,000
2.3.5	Municipal Water and Wastewater Grants	29,050	-	29,050	35,050	-	35,050	19,050
	Total Sub-program	539,350	-	539,350	604,250	-	604,250	238,250
TOTAL PROGRAM		2,099,855	-43,600	2,056,255	2,063,140	-14,800	2,048,340	1,485,125
PROGRAM OPERATING EXPENSE		1,737,293	-7,600	1,729,693	1,835,425	-14,800	1,820,625	1,274,525
PROGRAM CAPITAL INVESTMENT		362,562	-36,000	326,562	227,715	-	227,715	210,600

Table 3
Current Presentation
Income Statement

For Illustrative Purposes Only

Ministry Income Statement

(thousands of dollars)

	Comparable 1998-99 Actual	Comparable 1999-2000 Budget	Comparable 1999-2000 Forecast	2000-01 Estimates	2001-02 Target	2002-03 Target
REVENUE						
MINISTRY REVENUE	189,047	339,076	343,076	328,226	237,408	237,558
EXPENSE						
Program						
North-South Trade Corridor	30,292	16,000	76,000	-	-	-
Provincial Highway Systems	272,315	280,000	285,500	361,018	372,546	358,693
Transportation Safety Services	17,918	18,980	18,980	20,342	20,445	20,770
Rural Transportation Partnerships	56,233	63,500	83,500	160,000	-	-
Alberta Cities Transportation Partnerships	87,961	119,700	434,700	256,300	600	1,900
Streets Improvement Program	24,808	12,000	27,000	60,000	6,000	-
Resources Roads / New Industry	15,332	20,000	20,000	30,000	20,000	10,000
Other Road Infrastructure	4,281	5,100	5,100	5,100	5,100	5,100
Municipal Water and Wastewater	14,426	19,050	35,050	29,050	25,050	21,050
Leases	68,669	74,600	74,600	76,100	82,600	82,600
Property Operations	96,111	94,129	94,129	95,578	96,563	97,161
Health Care Facilities	108,998	115,000	185,000	168,000	78,000	78,000
Seniors' Lodges	20,432	16,200	21,100	17,100	17,100	17,100
Government Facilities	25,526	22,975	29,975	19,795	20,450	20,450
School Facilities	140,030	140,030	140,030	160,030	140,030	140,030
Post-Secondary Facilities	43,062	60,600	98,600	47,400	45,700	40,800
Support Services	67,387	71,804	71,804	71,671	73,324	74,159
Cross-Government Services	13,869	12,600	12,600	13,602	13,705	13,813
Amortization	145,606	152,060	152,060	175,000	180,000	185,000
Nominal Sum Disposals	-	5,000	5,000	5,000	5,000	5,000
Consumption of Inventories	-	1,500	11,000	11,000	11,000	11,000
Valuation Adjustments	1,338	100	100	100	100	100
MINISTRY EXPENSE	1,254,594	1,320,928	1,881,828	1,782,186	1,213,313	1,182,726
Gain(Loss) on Disposal of Capital Assets	-771	-5,000	-5,000	-	-	
Write Down of Capital Assets	-858	-10,000	-10,000	-	-	
NET OPERATING RESULT	-1,067,176	-996,852	-1,553,752	-1,453,960	-975,905	-945,168

Ministry Capital Investment

(thousands of dollars)

	Comparable 1998-99 Actual	Comparable 1999-2000 Budget	Comparable 1999-2000 Forecast	2000-01 Estimates	2001-02 Target	2002-03 Target
North-South Trade Corridor	64,720	79,500	81,800	155,000	156,000	108,000
Provincial Highway Systems	99,637	73,100	84,600	139,882	143,601	76,806
Resources Roads / New Industry	3,572	4,000	4,000	4,000	4,000	4,000
Other Road Infrastructure	10,006	6,100	6,100	7,900	5,400	2,900
Water Management Infrastructure	46,398	31,800	37,500	30,850	31,800	31,800
Land Acquisition	11,192	10,100	7,715	15,100	10,100	5,100
Government Facilities	1,277	6,000	6,000	9,830	9,320	9,320
Support Services	8,431	7,410	7,410	6,410	6,510	6,510
Cross-Government Services	1,582	1,250	1,250	1,500	1,250	1,250
CAPITAL INVESTMENT	246,815	219,260	236,375	370,472	367,981	245,686

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GST	GST not an issue; entities are exempt • Irrigation Districts are not required to pay GST • Authority: Advice received by the Irrigation Districts from Revenue Canada	GST is an **eligible** project expense • The 2.24% non-refundable GST is paid out of project costs • Authority: Policy	GST is an **eligible** project expense • Less than 100% of project costs provided to post-secondary institutions • GST costs are allowable but partially refunded by the Federal Government	GST is not an issue for the RHAs (GST exempt); GST is not an eligible project expense for other health care providers • Regional Health Authorities (RHAs) are GST exempt • GST amounts incurred by voluntary or private health care providers (providing health services under contract with the RHAs) are the responsibility of the voluntary or private health care providers; no portion of the non-refundable GST is reimbursed by Alberta Infrastructure • Authority: legal advice received by the department	GST is not an eligible project expense • GST is not paid by Alberta Infrastructure • Municipalities must pay the 3% non-refundable GST • Authority: Policy	GST is not an eligible project cost • GST is not paid by the AHRF	GST is not an eligible project cost • GST is not paid by Alberta Environment	GST is not an eligible project cost • GST is not paid by Alberta Environment	GST is not an eligible project expense • GST is not paid by Alberta Infrastructure (AI) for the portion of work funded by the ministry • For the portion of work locally funded by the Foundations, AI collects GST on behalf of the federal government • Foundations subsequently submit claims and receive a rebate of 50% of the GST paid • Authority: Policy	GST is an **eligible** project expense • Authority: Policy

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Funding Method	Funding is advanced up-front	Funding is advanced on a pre-determined funding formula	Funding is advanced up-front	Funding is advanced as an accountable grant based on forecasts	Some funding is advanced up-front, then by installments	Funding is on a reimbursement basis or advanced on a predetermined schedule	Funding is advanced up-front or by installments	Reimbursement basis	Reimbursement basis	Funding is advanced up-front
	• 100% of the grants are deposited early in the year (usually April) based on an Application and One-Year Plan submitted by each Irrigation District • Funds are expended from the account as construction is completed on projects approved by Irrigation Council • Expenditures are documented by progress certificates filed with AAFRD • Authority: Irrigation Districts Act (IDA), IRFA	• According to policy, 50% of funding is flowed to Building Quality Restoration Program (BQRP) projects, in practice, 90% is flowed up-front and 10% upon receipt of final report. • For new construction and modernization, 10%, 40%, 40% advanced based upon progress claims and final 10% based on final costs **New policy currently under development**	• Lump sum funding provided in advance	• Quarterly grant payments based upon forecasted cashflow requirements • 100% up-front grant payments advanced to the Public Private Partnership (P3) Long Term Care Projects (per Treasury Board Decision)	• Initial advances for project specific grants vary from 50% to 80% based on the size, status and duration of projects • Additional advances may be made, as required • Final balance of grant paid based upon statements of final costs • Formula based capital grants and maintenance grants may be advanced in full • Authority: Infrastructure Program Guidelines	• Grants are not generally advanced, but are paid upon receipt of invoices submitted by applicants • In the Mainstreet Program, grants are advanced following a predetermined schedule	• WMAP funding advanced to Waste Management Authorities • RRP grants made in installments	• 65% of expenditures are reimbursed • Special policy may allow up to 100% provincial funding for a limited number of pre-1978 projects constructed in the designated Northern Alberta Erosion Control Area	• Grants are paid upon receipt of invoices submitted by the Foundations	• 100% of the approved amount is paid to the recipient within two weeks of the Minister signing the conditional grant agreement; Authority: Policy • For special initiatives, the Minister may provide for the payment in lump sum or by way of installments, and may prescribe the time or times at which the grant is to be paid; Authority: AR123/2000

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Banking Arrangement	**Funds are deposited into non-government bank account** ❑ A separate cost sharing account is set up by each Irrigation District ❑ Provincial IRP grants are deposited by Alberta Agriculture, Food and Rural Development (AAFRD) directly to that account ❑ Irrigation Districts deposit their 25% to that account and provide confirmation to AAFRD ❑ Authority: IRFA	**Funds are deposited into non-government bank account** ❑ Funds are transferred to the School Board and generally are deposited into their general revenues **New policy currently under development**	**Funds are deposited into non-government bank account** ❑ Funds are transferred directly to the PSI	Funds are deposited into a government monitored trust fund account ❑ Funds are deposited to the Consolidated Cash Investment Trust Fund (CCITF) account that the RHA and Province have signing authority for ❑ Alberta Infrastructure monitors Consolidated Cash Investment Trust Fund (CCITF) account - both interest and surplus funds ❑ Facilitates interest earned being transferred directly to the Province ❑ Authority: AR244/90	**Funds are deposited into non-government bank account** ❑ Funds are transferred directly to Municipality bank accounts ❑ Authority: Infrastructure Program Guidelines	Funds are deposited into non-government bank account ❑ Funds are transferred through EFT or by cheque to grant recipient ❑ In the Mainstreet Program, direct deposits are made to the Town or BRZ (Business Revitalization Zone) account	**Funds are deposited into non-government bank account** ❑ Funds are deposited into a separate interest bearing account maintained exclusively for the project	**Funds are deposited into non-government bank account** ❑ Grant funds paid directly to the recipient	**Funds are deposited into non-government bank account** ❑ Grant funds flow directly to the Foundations	**Funds are deposited into non-government bank account** ❑ Grant funds are paid directly to the recipient ❑ Authority: Policy

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Interest Earned	Interest earned is retained by external stakeholders for approved projects and not returned to Province • A separate cost sharing account is set up by each Irrigation District for its IRP funds • Any interest accrued in the account shall be added to and become part of the fund • Authority: Irrigation Rehabilitation Financing Agreement (IRFA)	Interest earned is retained by external stakeholders for approved projects and not returned to Province • Beginning in 1999-2000, interest earned is retained by School Boards for any educational purposes • In 2000-01, interest earned on capital advances or school or land sales is to be used for a School Buildings Board (SBB) approved project or set aside in a capital reserve for future projects • Authority: Policy	Interest earned is retained by external stakeholders for approved projects and not returned to Province • Interest earned is retained by the post-secondary institutions • This treatment of interest revenue is based on past practices of partial project funding	Interest earned is **returned** to Province • Interest earned is transferred automatically from the CCITF account to the Province • Report provided to RHAs on amount transferred • Authority: AR 244/90 **Proposal is underway to revise policy to allow RHAs to retain interest revenue for use on approved projects**	Interest earned is retained by external stakeholders for approved projects and not returned to Province • Interest must be tracked (actual via bank accounts or imputed based upon interest rate and time) and is credited to project costs • Accounting for interest earned generally occurs in either annual financial reports or final reconciliation payments • Authority: Infrastructure Program Guidelines	Interest earned is retained by external stakeholders for approved projects and not returned to Province • For reimbursed costs, there is no earned interest • In the Mainstreet Program, a program under the AHRF, any interest earned becomes part of the grant and is used exclusively for the project.	Interest earned is retained by external stakeholders for approved projects and not returned to Province • Interest earned becomes part of the grant and is used exclusively for the project	Interest earned is **returned** to Province • Local authority shall maintain grant funds in a separate account and use funds for payment for construction and engineering costs	Interest not an issue since reimbursement basis • Expenditures are reimbursed as they are billed for work completed, therefore no interest is earned	Interest earned is retained by external stakeholders for approved projects and not returned to Province • Interest earned is applied on an ad-hoc basis • In some cases, where grant recipients have requested long-term extensions for project completion, the conditional grant agreement is amended to stipulate that interest earned must be tracked and applied to the project • Authority: Policy

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Surplus Funds at completion of projects	Surplus funds are retained by external stakeholders for approved projects and not returned to Province • Any balance in the account remaining at the end of the year is carried forward for use on future projects under this agreement or other cost sharing agreements • If the program ends or no further cost sharing agreement is entered into, the funds are used to complete approved projects. Any remaining balance is disbursed 75% back to the Province and 25% to the Irrigation District. • Authority: IRFA	Surplus funds are retained by external stakeholders for approved projects and not returned to Province • BQRP funding carried over • New construction/ modernization - no surpluses as funding is paid on a progress basis on actual costs • Authority: Policy **New policy currently under development**	Surplus funds not an issue in the past since partial funding • No surpluses as only partial funding is provided	Surplus funds are **returned** to Province • Surplus funds are returned to the Province as determined by project audits or final project financial reports at project completion • For the P3 long-term care projects, RHAs will report annually to Health & Wellness on the status of the project account • Authority: AR244/90	Surplus funds are retained by external stakeholders for approved projects and not returned to Province • The Minister may advise a municipality to retain the surplus funds as an advance on other grant allocations • Authority: Infrastructure Program Guidelines or Grant Agreement	Surplus funds are retained by external stakeholders for approved projects usually • As grant monies are generally provided on a reimbursement basis, there are no surplus funds • Under the Mainstreet Program, if there are surplus funds at the end of the 3-year agreement: ➢ Town must submit a proposal to AHRF for spending approval ➢ If not approved, surplus funds will revert back to AHRF	Surplus funds are returned to Province	Surplus funds are returned to Province • Surplus funds including interest are returned back to the Province	Surplus funds not an issue since reimbursement program • Since grant funding is provided on a reimbursement basis there are no surplus funds	Surplus funds are returned to Province • The grant recipient agrees to use the entire amount of the grant for the purposes of carrying out the project • The recipient must repay the Province all or any portion of the grant demanded by the Minister in the event of non-compliance with the grant agreement • Authority: AR123/2000

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Financial Audits	Separate project audit is not required • Project financial reports are required • Each Irrigation District's annual financial statement is audited • The audit of the IRP cost sharing account (restricted fund) forms part of the Irrigation District's annual financial statements filed with AAFRD • The records shall at all times be open for inspection by the Province and for audit purposes • Authority: IRFA, IDA	Separate project audit or financial reporting is not required • Part of School Board annual audit **New policy currently under development**	Separate project audit or financial reporting is not required • Part of post-secondary institution's annual audit • Accountability reports on the use of funding required within 6 months after Institution's fiscal year- end	Separate project audit or financial reporting is **required** • Audits required on projects over $2.5 million; final financial reports required for those under $2.5 million	Separate project audit or financial reporting is not required • Normally municipal audits are performed • The department may do selective financial audits • Municipalities provide financial statements and, if required, invoices for completed projects • Authority: Infrastructure Program Guidelines	Separate project audit or financial reporting is **required** • On a random basis, projects are regularly selected for audit by the Internal Audit Unit	Separate project audit or financial reporting is **required** • Progress reports • Auditors report, financial statements and a statement of interest earning: is required within 90 days after the project completion date	Separate project audit or financial reporting is **required** • Statement of funding and expenditures • Itemized project costs	Audits are not an issue since province manages projects • No final audits required for 95% of projects managed and directly paid by Alberta Infrastructure • Remaining projects are reviewed for compliance with grant funding agreement	Separate project audit or financial reporting is not required • The department may conduct evaluations or audits of the project at any time • A Review Engagement Report is required for grant exceeding $100,000; a short report on realization of project benefits is required for grant exceeding $50,000. • In all cases, an **Acknowledgement of Compliance form** is required upon project completion. • Authority: AR123/2000

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Disposition of Property	Property disposition not an issue since province has no ownership rights	Prior approval from the Province is required	Prior approval from the Province is required	Prior approval from the Province is required	Proceeds must be used for future projects	Property disposition not an issue since province has no ownership rights	Prior approval from the Province is required	Property disposition not an issue since province has no ownership rights	Prior approval from the Province is required	Property disposition not an issue since province has no ownership rights
	• The Province obtains no right to, title to or interest in any approved projects constructed with IRP funds • Irrigation works are not normally disposed of as they have no alternative use • Where works constructed with cost shared funds are replaced with new works constructed with cost shared funds, a prorated portion of the original cost is paid back to the cost sharing account by the Irrigation District • Authority: IRFA, IRP Policy	• Requires approval of the Minister of Infrastructure • Must repay outstanding debenture debt • Proceeds are retained by the School Board and only used for approved future capital projects • Must be advertised at market value • Authority: AR 75/97 Disposition of Property Regulation	• Governed by the four post-secondary acts (Universities Act, Colleges Act, etc.) • Requires Order in Council approval • Proceeds are retained by post-secondary institutions for approved program purposes	• Requires the recommendation of the Ministers of Health and Wellness and Infrastructure and Cabinet Approval • Sale at fair market value • Ministers shall set conditions on use of proceeds • Net proceeds deposited in the CCITF account and reserved with Cabinet approval for health needs in the region • Must meet any previous conditions set by the Ministers such as return of funds to municipality for contributions made (e.g., land) • Authority: Cabinet Decision May 14, 1996	• For the Basic Capital Grants to Cities Program, the salvage value from the sale of previously cost-shared assets, must be credited to the grant program and applied against future projects • For other grant programs, if deemed appropriate, the same principle, as above, is applied • Authority: Provincial Program Guidelines; Agreement Notes	• AHRF does not have Capital Assets • Grant recipients may dispose of property freely, however, alterations to designated properties must meet requirements of the Historical Resources Act • Owners must notify the department of any change in ownership • Not applicable for the Mainstreet Program	WMAP • Requires approval of the Minister of Environment if disposed of within ten years RRP • Requires approval of the Minister of Environment	• Costs associated with construction right-of-way are not eligible program costs	• Requires Ministerial approval - Community Development if title held by Foundation and Infrastructure if title held by province • Proceeds from sale can be applied to the cost of new facility • Authority: Policy under the Seniors Lodge Upgrading Program	• Ownership of property acquired with grant proceeds rests with the grant recipient unless otherwise stipulated in the conditional grant agreement. • Authority: Policy

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Strategy 2

Infrastructure Management Systems

STRATEGY 2 - INFRASTRUCTURE MANAGEMENT SYSTEMS

1. Introduction

Purpose

In fiscal year 2000-2001, significant work was completed in support of an integrated Infrastructure Management System (IMS).

The overall goal of the Capital Planning Initiative is to ***"Implement initiatives to ensure effective, innovative capital planning and funding decisions."***. A task group focusing on the infrastructure management system needs of government owned infrastructure was formed to complete the following strategy as identified in the Capital Planning Initiative.

> *Implement effective, independently verifiable infrastructure management systems (IMS) and common key performance measures for owned infrastructure to improve planning and priority setting.*

The following targets were established for 2000-01 for IMS Strategy and Development:

IMS Strategy
Initiate the implementation of the strategy for developing common infrastructure management systems for each category of owned infrastructure by March 31, 2001.

IMS Development
Over 85 percent of owned infrastructure to be supported by a substantially developed IMS by March 31, 2001.

Process

The following tasks and activities were completed in order to meet the targets:

IMS Strategy

- Reviewed the IMS Strategy of the Capital Planning Initiative Report from March 2000 and established specific categories of government owned infrastructure;
- Reviewed existing systems to determine whether they meet the essential requirements of an IMS Framework and evaluated the feasibility of using them as a basic common system for a category of infrastructure;
- Analyzed each system to determine cost effectiveness of making modifications to meet the needs of different users;
- Recommended a common IMS system for each category of infrastructure;
- Recommended a strategy for future modifications that will continue to meet the technology and business requirements of stakeholders; and
- Worked cooperatively with the Task Group on infrastructure management system for supported infrastructure to share information, findings and recommendations for IMS for government owned infrastructure with a view of making the systems available for supported infrastructure.

IMS Development

- Continued the development of the IMS systems for government facilities and transportation infrastructure to achieve the established targets for individual programs.
- Initiated and supported the development of Environment Infrastructure Management System (EIMS) and initiated the preparation of a plan to develop the Collections and Exhibits Infrastructure Management System (CEIMS).

2. IMS Strategy

All existing IMS in Infrastructure, Environment and Community Development were examined for the purpose of identifying a common system for each category of owned infrastructure (e.g., buildings, transportation, water management and collection and exhibits infrastructure). This evaluation was conducted according to the guidelines detailed in the Physical IMS Framework (refer to the CPI Report, 1999-00). All proposed solutions for IMS are committed to the vision of integrated data and common applications and reporting. The following organizational realities and constraints were considered in developing a strategy:

- To meet the operational requirements, the existing systems must continue to support current business operational needs and to capture performance measurement data;
- To leverage technological changes, minimize risk, and be cost effective, common IMS systems need to be phased in gradually;
- To consider longer term system evolution as part of initial development, there is a need to make informed decisions about software uniqueness versus the ease of software integration to support future efficiency;
- More involvement from stakeholders will be required in developing and implementing common IMS; and
- The strategy for addressing future enhancement and modifications will be driven by business needs and supported by proper cost effective solutions.

Recommendations related to each category of infrastructure are outlined as follows:

Buildings
The Buildings and Land Infrastructure Management System (BLIMS) in Infrastructure is recommended as the common system for building infrastructure due to its capability to support a comprehensive set of building inventory data for different users. The current system also meets existing data capture needs to report key performance measures. Following are features of BLIMS that will be enhanced:

- Strengthening of planning capacity;
- Integration of systems;
- Improved process for capturing key performance measures;
- Ability of stakeholders to access and exchange building and land infrastructure data; and
- Upgrading of older technologies.

BLIMS will allow different users with buildings infrastructure to use the system.

Joint discussions, meetings, and information sharing with the Task Group on IMS for supported infrastructure have taken place to ensure that the common IMS for owned infrastructure will, as much as possible, meet the requirements for supported infrastructure. Health and Learning Facilities infrastructure will be included in BLIMS.

A phased implementation based on business needs is planned for BLIMS.

Roads and Bridges
The Transportation Infrastructure Management System (TIMS) in Infrastructure is recommended as the common system for transportation infrastructure based on the following findings:

- TIMS currently supports a vast majority of the government highways, roads and bridges information;
- TIMS is a relatively new system with a substantial amount of funding invested to date;
- To leverage potential for future technology opportunities and changes, the TIMS database was modified in late 2000. This effort provides assurance that TIMS has the ability to meet future data capture needs without extensive system changes;
- Road signage data relating to cultural and historical sites (Community Development) has already been incorporated into TIMS;
- There is a pilot project underway to capture roads maintained by Environment in TIMS.

Water Management
Environment's Infrastructure Management System (EIMS) is recommended to become the common IMS for water management infrastructure. EIMS supports the planning and funding requirements for all environment-related infrastructure. It has a basic generic design to enable it to meet the similar water management needs of different users. EIMS is web-enabled, maintains Geographical Information System (GIS)-level data, adaptable to future system integration, and has a core technical architecture matching the targeted architecture of other infrastructure categories. This system can be modified to meet expected business and technical requirements.

Collections and Exhibits

Currently, there are over thirty-five different collection management systems, eight of which are involved in the management of the heritage collections and buildings. These systems are stand-alone applications residing on individual desktop computers, which essentially negates any potential for widespread use. Data is exclusive to each system and cannot be exchanged among any other systems.

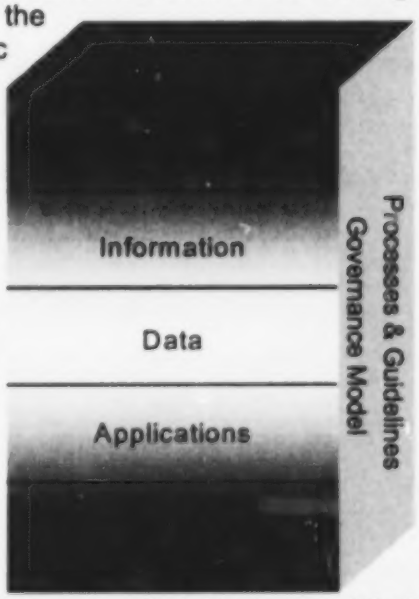
It is recommended that a new integrated system for the government-wide management of heritage collections, exhibits and displays (Collections and Exhibits Infrastructure Management System – CEIMS) be developed. This system would then become the common application for use across the government for all collections, exhibits and displays, such as Environment's natural history interpretive collection.

Collaboration with Task Group on Supported Infrastructure

Communication with the Task Group on infrastructure management systems for *supported* infrastructure and the Municipal Infrastructure Management System (MIMS) project team took place in a continuous manner to share information, findings, and recommendations in making common IMS available to boards, agencies and municipalities in the future.

Enterprise Architecture Framework

The objective of an Enterprise Architecture Framework is to better leverage information technologies to support achievement of the Capital Planning Initiative's strategic objectives. The Enterprise Architecture Framework defines the relationship of information to the infrastructure management functions, processes and their supporting information systems. It provides the framework and requirements for developing systems based on common business activities and data sharing. It will also align to the provincial government IM/IT (Information Management/Information Technology) vision and architecture.



The enterprise architecture provides a high-level framework for structuring information, applications, and technology components, their relationships, guidelines governing their design, and their evolution. It also forms the basis for planning, migrating and implementing infrastructure management related application systems.

Infrastructure management ***business*** processes include planning, programming/short term planning, budgeting, preliminary functional design/programming, design, construction/reconstruction, physical infrastructure operations, monitoring, evaluation, and budget control. Taking an enterprise-wide perspective on key processes provides a clearer understanding of how integrated activities and shared information can improve decision making and management capabilities. By viewing physical infrastructure management as a whole instead of focusing on area specific needs (e.g., inventory or planning only), one can focus on the commonalties within the business processes (e.g., contract management, etc.). With these commonalties in mind, improved information sharing will enhance the ability to summarize data across business areas, and promote timely executive management reporting.

The ***information*** architecture will enable collection, analysis and viewing of information for all infrastructure categories including transportation, buildings, water management, and collections and exhibits infrastructures. This includes, but is not limited to, the following:

- Establishing common executive management reporting and supporting roll-up or drill-down inquiries by using standard measures and infrastructure identification;
- Providing updated summary, descriptive or analytical information on client needs, financial projections, infrastructure demand, etc. for effective strategic planning and real-time decision making. Current information will support more informative capital resource allocation when and where it is needed to meet the requirements or demands of various stakeholders/partners;
- Accessing key condition, utilization, function and cost information related to physical infrastructure via geographical presentation or management reports. The availability of such information will provide a strong basis for assessing the quality, value, safety, performance, and utilization over the lifecycle of the structures in a consistent and on-going basis; and
- Capturing and consolidating project related information (e.g., project requests, criteria, schedule, scope, costs, projections, contracts, status, etc.) to support effective and efficient project management.

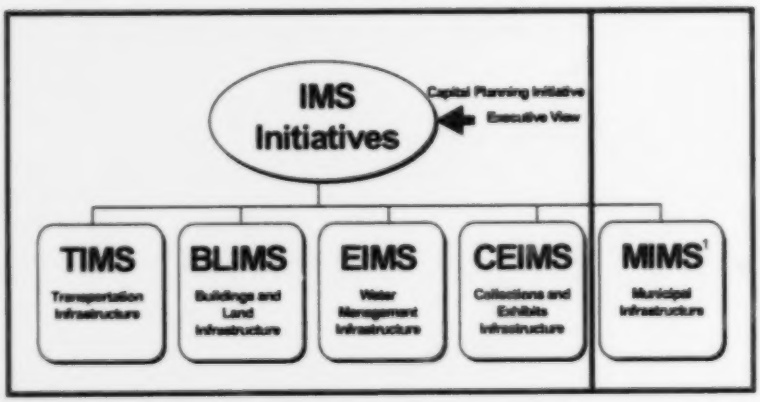
A single repository of inventory data will be developed for each category of infrastructure, (i.e., buildings, transportation, water management, and collections/exhibits) that will capture unique attributes and use of those attributes to support business processes for each infrastructure category. Groups of data related to the infrastructure management such as project, contract, evaluation, financial, safety, vendor and stakeholder data are linked to each infrastructure inventory.

Data related to project, contract, evaluation, finances and safety are business area specific. Consequently, each of these data groups will be captured to support specific business processes for each infrastructure category. Stakeholder and vendor data groups are more commonly used by all business areas regardless of infrastructure category. Each of these data groups can therefore be captured in repositories that are shared and accessed by all business areas and ministries. The Enterprise Architecture Framework calls for core data to be created once and used many times, thus eliminating duplicative, inefficient data management practices.

The ***applications*** architecture defines common, shareable enterprise applications and repositories to minimize system redundancy. Applications defined by the Enterprise Architecture Framework have resulted from a top-down look at the totality of the provincial infrastructure management functions, and the resulting information needs grouped as business objects. Applications have been defined as the vehicles to create and store information about a particular business object and its closely related data. Therefore, the scope of each application development project is a well-defined manageable piece, thereby speeding the delivery of usable applications and reducing the risk of failure.

The applications represent tools used to support the infrastructure management processes. These include the following:

- Inventory Applications. These applications create and maintain infrastructure inventory. The primary applications that create and maintain infrastructure inventory are: TIMS for roads and highways; BLIMS for buildings and land; EIMS for water management; and CEIMS (Collections and Exhibits Infrastructure Management System) for collections and exhibits inventory.



[1] MIMS will have a municipal focus that may lead to differences from the provincial systems

- Applications to Support Business Functions. These are the applications that use the infrastructure inventory data to support the infrastructure management business processes, e.g., planning, programming/short-term planning, preliminary functional design, design, construction, operations, monitoring, evaluation and budget control. These applications may include the following:

  - Planning Module – Enabling planners to view, approve and prioritize project requests; and to conduct "what if" analysis and budget management.
  - Prediction Module – Rate of deterioration models can be developed using historical information and/or expert opinion. These curves can be used to determine when the physical infrastructure, or any part, will require treatment and at what cost. They can also be used to determine the effects of deferring treatments.
  - Optimization Module – Analysis of costs and benefits over the reasonable expected life of a physical asset; and measuring costs of building and maintaining physical assets against the objectives those assets are intended to serve.
  - Evaluation Module – Tracking of evaluation data.
  - Acquisition and Disposition Module – Tracking of building/land acquisition and disposition.

- Common Business Support Applications. The tools used to support common business processes. These may include the following:

  - Executive Management Reporting Module – Reporting on physical infrastructure performance on an ongoing basis to enable timely executive decision-making.
  - Project Management Module – Managing project scope, schedule and expenditures.
  - Contract Management Module – Managing contract administration including contract approval, creation, amendment, forecast, payment and vendor performance tracking.
  - Financial Management Module – Consolidating all budget, forecast, and actual cost information for reporting/query purposes.

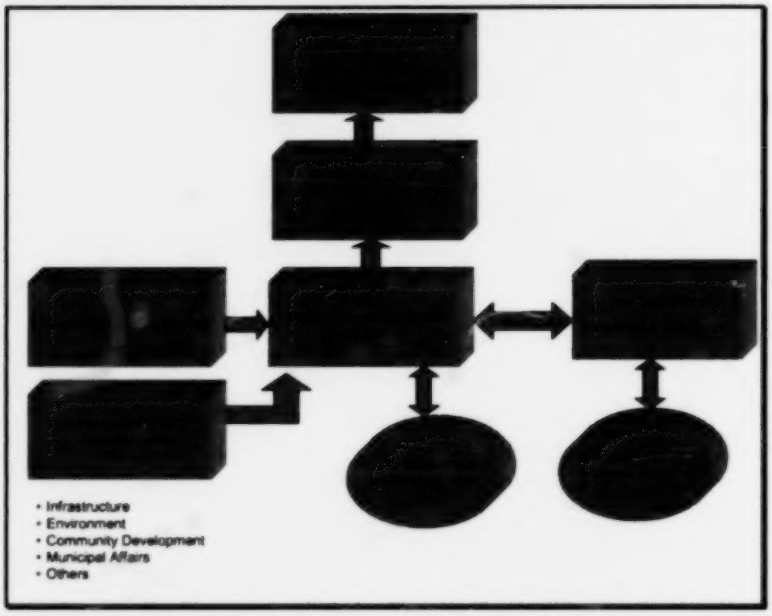
- Common Support Applications. These applications provide support functions. These may include the following:

  - Document Management Module – Storing, distributing and/or providing access to internal and external users for documents including engineering drawings, pictures, contracts, leases, reports, etc.
  - Security Module – Protecting the integrity, confidentiality, and availability of the data and systems.
  - User Interface Module – Creating a common entry point to all applications with a common "look and feel".
  - Geographical Information System Module – Providing geographical representation on location information.
  - System Administration Module – Creating and updating user profiles and providing specific security to various application modules and data repositories.

The ***Technology*** component of the Enterprise Architecture Framework defines the major kinds of technologies needed to provide an environment for the applications that are managing data. This includes Web-enabled technology, Geographical Information System, Oracle database management system, network services, security services and data interchange services.

Governance

Strong leadership from senior management will be required to achieve acceptance and ownership to the new approach. Ongoing architectural maintenance and an enterprise data management capability become critical path items. Resources will be required to develop the procedures and repositories needed to maintain the architectures and integrate their use into the system development life cycle and other related processes. A governance model (as shown at right) has been recommended to lead and coordinate the design, development and implementation of all enterprise architectures; communicate directions, approve standards, manage changes; and work closely with all stakeholders, users, and the CIO Office of Innovation and Science to translate architectural direction and guidance to ensure successful implementation.



Preliminary guidelines and ministry plans were established for supporting migration from current to target architecture; for adopting architecture standards that align with the enterprise architecture; and for developing and refining current and future architectures in a consistent format.

3. IMS Development – Implementation Results

Implementation results for 2000-2001 indicate the targeted goal of having 85% of owned infrastructure being supported by a substantially completed IMS (70% completion or better) was met.

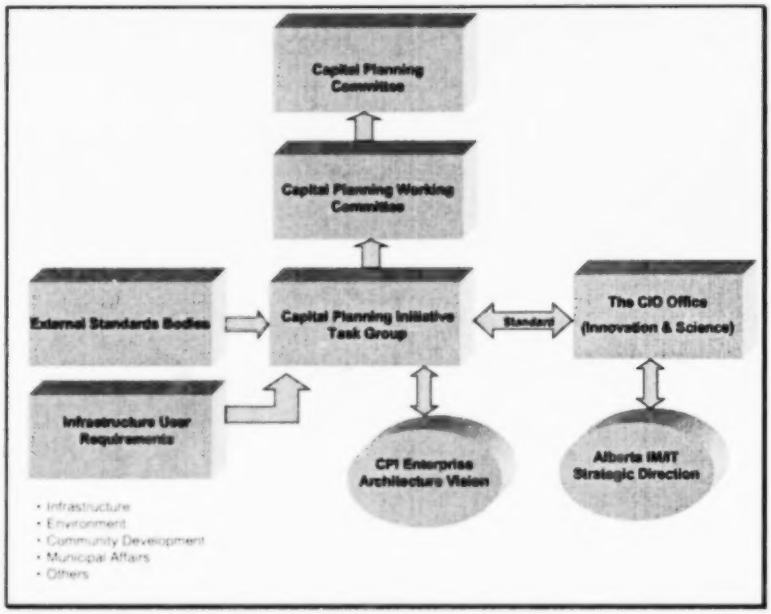
Table 5
Status of IMS Development
Owned Infrastructure
2001-01

Category of Infrastructure	Status of IMS Development	Replacement Value	% of Value Supported by IMS	Value Supported [1]
Buildings				
Social Housing	100%	1,519	100%	1,519
Government Buildings	100%	3,500	85%	2,964
Heritage Buildings	80%	58	50%	29
Natural Heritage Sites (Parks)	60%	381	0%	0
Land & Forest Infrastructure	40%	44	0%	0
Transportation				
Provincial Highways	100%	19,600	100%	19,600
Bridges	100%	1,613	100%	1,613
Other Roads and Infrastructure	30%	15	0%	0
Water Management	85%	**4,300**	80%	3,440
Collections, Exhibits and Interpretive Infrastructure				
Historical Collections	80%	287	50%	143.5
Heritage Exhibits & Interpretive Infrastructure	80%	70	40%	28
Total - Owned Infrastructure		**31,387**		**29,337**
	% Replacement Value Supported by IMS			**93%**
		2000-01 Target		85%

[1] Replacement value multiplied by the % of value supported by a 'substantially completed' IMS, i.e. systems development is greater than 70% complete.

Governance

Strong leadership from senior management will be required to achieve acceptance and ownership to the new approach. Ongoing architectural maintenance and an enterprise data management capability become critical path items. Resources will be required to develop the procedures and repositories needed to maintain the architectures and integrate their use into the system development life cycle and other related processes. A governance model (as shown at right) has been recommended to lead and coordinate the design, development and implementation of all enterprise architectures; communicate directions, approve standards, manage changes; and work closely with all stakeholders, users, and the CIO Office of Innovation and Science to translate architectural direction and guidance to ensure successful implementation.



Preliminary guidelines and ministry plans were established for supporting migration from current to target architecture; for adopting architecture standards that align with the enterprise architecture; and for developing and refining current and future architectures in a consistent format.

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Implementation results for 2000-2001 indicate the targeted goal of having 85% of owned infrastructure being supported by a substantially completed IMS (70% completion or better) was met.

Table 5
Status of IMS Development
Owned Infrastructure
2001-01

Category of Infrastructure	Systems Development % COMPLETE	Replacement Value ($ Millions)	% of Value Supported by an IMS	Replacement Value Supported ($ Millions) [1]
Buildings				
Social Housing	100%	1,519	100%	1,519
Government Buildings	100%	3,500	85%	2,964
Heritage Buildings	80%	58	50%	29
Natural Heritage Sites (Parks)	60%	381	0%	0
Land & Forest Infrastructure	40%	44	0%	0
Transportation				
Provincial Highways	100%	19,600	100%	19,600
Bridges	100%	1,613	100%	1,613
Other Roads and Infrastructure	30%	15	0%	0
Water Management	85%	**4,300**	80%	3,440
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Strategy 2

Performance Measures

STRATEGY 2 - PERFORMANCE MEASURES - OWNED INFRASTRUCTURE

1. Introduction

Purpose

The following target for performance measures was set for 2000-01:

Baseline Data
Establish baseline data for three measures for each category of owned infrastructure by March 31, 2001.

Process

- Reviewed existing key performance measures for the different categories of infrastructure; and
- Continued the collection or development of baseline data and to achieve the established target via joint cooperation between department representatives on the task group and their respective departments.

2. Results

Baseline data was collected for most of the outstanding items from the previous year. A substantial amount of analysis was completed during the past year to refine the definition of key performance measures for each type of infrastructure. The following table indicates that baseline data for 96% of provincially-owned infrastructure was reported.

Table 6
Performance Measures - Owned Infrastructure
Status of Data Collection
2000-01

Category of Infrastructure	Replacement Value ($ Millions)	Baseline Data Available (Y/N)	Replacement Value Reported ($ Millions)
Buildings			
Social Housing	1,519	Yes	1,519
Government Buildings	3,500	Partial	2,964
Heritage Buildings	58	Yes	58
Natural Heritage Sites (Parks)	381	No	0
Land & Forest Infrastructure	44	No	0
Total Buildings	**5,502**		**4,541**
Transportation			
Provincial Highways	19,600	Yes	19,600
Bridges	1,613	Yes	1,613
Other Roads and Infrastructure	15	No	0
Total Transportation	**21,228**		**21,213**
Water Management	**4,300**	Yes	**4,300**
Collections, Exhibits and Interpretive Infrastructure			
Historical Collections	287	No	0
Heritage Exhibits & Interpretive Infrastructure	70	No	0
Total Collections, Exhibits, Interpretive Infrastructure	**357**		**0**
Total - Owned Infrastructure	**31,387**		**30,054**
% Replacement Value for which Baseline Data is Available			**96%**

The following are the key performance measures to be used by all ministries with responsibility for owned or supported physical infrastructure:

Performance Criteria	Measure
Physical Condition	Percentage of physical infrastructure rated as being in acceptable condition.
Utilization	Percentage of physical infrastructure for which utilization level is within targeted capacity.
Functional Adequacy	Percentage of physical infrastructure that provides acceptable functional service.

2.1 Summary

Following is performance data for the key performance measures for 2000-2001 for owned infrastructure. Details of performance measures are included on subsequent pages.

Table 7
Performance Data - Owned Infrastructure
2000-01

				Physical Condition	Utilization	Functional Adequacy
Category of Infrastructure	**Notes**	**Replacement Value ($ Million)**	**% of Total Infrastructure**	**% Rated as Acceptable**	**% Utilization within Target Capacity**	**% Providing Acceptable Service**
Buildings	*1*	4,541	15%	97%	90%	85%
Transportation	*2*	21,213	68%	94%	98%	87%
Water Management	*3*	4,300	14%	96%	98%	99%
Aggregated Infrastructure 2000-01	*4*	**30,054**	**96%**	**95%**	**97%**	**89%**
Aggregated Infrastructure 1999-00			**88%**	**94%**	**92%**	**87%**

1. The percentage of buildings rated as 'in acceptable physical condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life. The functional adequacy measure is improved from 1999-00 as a number of buildings that did not provide acceptable service have been disposed of.

2. Functional Adequacy measure is being revised as a result of the addition of secondary highways and urban links to the Primary highway system. Measure is based on 1999-00 data.

3. The Utilization measure excludes non-headworks water management infrastructure for which utilization is not a relevant measure.

4. Data is not available for natural heritage sites (parks), government-owned buildings less than 1000m^2, other roads and infrastructure, exhibits, and interpretive infrastructure.

2.2 Physical Condition Performance Measure

Measure
Percentage rated in acceptable condition, which includes 'fair' and 'good' condition on a 3-point scale of 'poor', 'fair', 'good'.

Rationale
Current physical condition is a critical factor involved in the decision to reconstruct, rehabilitate and maintain infrastructure.

Scope
Includes current physical condition of infrastructure based on established standards for that particular type of infrastructure (e.g. load bearing capacity, sound/stable foundation; and compliance with health and safety standards, fire regulations, ventilation system).

Methodology
The physical condition of infrastructure will be rated based on a common rating scale (i.e. poor, fair, good) with 'fair' and 'good' rated as 'acceptable'. Established infrastructure-specific standards are used as the basis for rating physical condition.

Following is a detailed description of how the government-wide definitions for physical condition have been applied for specific owned infrastructure types for 2000-01.

2.2.1 Building Infrastructure - Physical Condition

Infrastructure Buildings
The measure is the percentage of total buildings that are rated in acceptable condition that includes 'fair' and 'good' condition as indicated by the following definitions.

Good	Adequate for intended use and expected to provide continued service life with average maintenance.
Fair	Components are aging and nearing the end of their life cycle requiring additional expenditures for renewal or refurbishing.
Poor	Requires upgrading to comply with minimum codes or standards and deterioration has reached the point where major repairs or replacement are necessary.

This measure is based on the condition rating of active buildings with gross areas over 1000 m^2. Currently the 319 buildings in the inventory that meet this criterion represent 85% of the total area of owned space. Owned buildings which have been turned over to Regional Health Authorities for long term operation are not included in this measure but will be included in the supported infrastructure measures. The condition of the 319 buildings is expected to reflect the condition of the 15% of owned space (2156 smaller buildings) not included in the sample.

Ratings are made using a comprehensive building evaluation instrument that reflects the experience and expertise of the building industry and other public jurisdictions. Buildings are reviewed on a 5-year cycle using a combination of independent consultants and government staff. Individual building components and the overall building condition are rated using a nine-point scale. Ratings are converted to the above *Good-Fair-Poor* system.

Lands and Forests Buildings - Physical Condition
All active buildings owned by Environment are being assessed by independent consultants using a five-point scale. Ratings are converted to the three point (Good, Fair, and Poor) system that is applied to Infrastructure owned buildings.

Social Housing - Physical Condition
The measure is based on the condition of all active buildings using a modified version of the instrument used for government owned buildings. Independent consultants make ratings on individual building components as well as on the overall building condition using a five-point scale. Ratings are converted to the agreed three-point system.

Heritage Buildings - Physical Condition
Heritage buildings are those which are significant for their architectural merit or for their historical associations. The province owns and manages 14 heritage buildings where heritage landscapes and structures comprise part of the sites' infrastructure. Of these, 11 are operational sites, and 3 contain structures that are either stabilized or are awaiting stabilization.

Operational historic buildings are an integral part of the department's core business objective to preserve and present Alberta's cultural history. The goal is to maintain these historic buildings as valuable examples of our history. For operational buildings, the department uses the same three point system employed by Infrastructure (Good, Fair, Poor).

Cultural landscapes are often developed in association with historic buildings. The department applies the same performance measurement framework as operational historic buildings.

At selected sites the department has limited site development to the stabilization of existing structures or ruins (i.e. Leitch Collieries). At sites awaiting development, structures are protected in the interim by being "mothballed". In these instances these measures are modified as follows:

Good Adequate measures have been taken to prevent intrusion or accelerated deterioration. Only minor annual preventative maintenance is required.

Fair Measures to prevent intrusion or accelerated deterioration are failing. Moderated scheduled maintenance is required within 3-5 years.

Poor Measures have failed or have not been put in place to prevent accelerated deterioration or intrusion. Major capital maintenance is required within 1-2 years to prevent irreversible damage.

2.2.2 Transportation Infrastructure - Physical Condition

Provincial Highways
Physical condition for provincial highways is based on riding comfort measured by the International Roughness Index (IRI). IRI is measured by independent consultants using specialized equipment.

The physical condition measure is the percentage of the highway system that has an IRI rating of better than 2.7. For reference purposes the United States Federal Highway Administration (FHWA) has established the following benchmarks for IRI. Generally speaking, non-interstate highways can be compared to Alberta Provincial highways.

FHWA Standard		
IRI Rating	**U.S. Interstate**	**Non-Interstate**
Very Good	Less than 0.95	Less than 0.95
Good	0.95 – 1.49	0.95 – 1.49
Fair	1.50 – 1.89	1.50 – 2.69
Poor	Greater that 1.90	Greater than 2.70

Bridges and Structures
The measure is the percentage of bridges and bridge size culverts with a structural condition rating (SCR) better than 40%, which is equivalent to fair or good condition. The measure encompasses all bridges and culverts in the provincial highway system. It is based on a visual rating of the infrastructure utilizing a system that has been developed for Alberta and that is part of the bridge inspection process that is accepted across North America. SCR is based on a 9-point scale. Independent consultants who have been certified by Infrastructure carry out bridge inspections.

2.2.3 Water Management Infrastructure - Physical Condition

This measure is based on an assessment of water management structures. The measure is the percentage of infrastructure totaled by replacement value that is in acceptable condition. Acceptable condition includes infrastructure in 'good' or 'fair' condition as indicated by the following rating definitions.

Good	Ranging from new or 'like new', requiring minimal maintenance; to fully operational and requiring normal maintenance.
Fair	Operational but requiring considerable ongoing maintenance.
Poor	Ranging from operational, with excessive ongoing maintenance, and failure may be possible during a major event; to not operational, or failure may be imminent or occurred.

The assessments are done by independent consultants on the basis of visual inspections and discussions with staff that are familiar with the operation of the infrastructure. The five-point scale used for the ratings is converted to the above three-point scale. Where initial inspections identify potential problems, a more detailed (level 2) analysis utilizing engineering techniques is employed to confirm the nature and extent of the problems.

A consequence of failure rating is also determined and combined with the condition rating in a matrix format to determine a risk index value for the infrastructure. This approach is used or being considered by other jurisdictions in North America.

The comprehensiveness of the assessment instrument continues to be reviewed in light of best practices in other jurisdictions.

2.2.4 Historical Collections - Physical Condition

The owned historical collections of Community Development are comprised of the artifact, specimen and archival holdings of the Provincial Museum of Alberta, the Provincial Archives of Alberta, the Royal Tyrrell Museum of Alberta, the Glenbow Museum and the human history collections of the sites comprising the Historic Sites Service of Alberta.

This measure consists of two essential components. The first measures the actual condition of the items within a collection through the application of a three-point scale. The final rating is given as the percentage of items within a given collection meeting the given performance standard. The percentage is calculated in terms of replacement value. For reporting purposes, the lowest rating of the two measures is reported.

Good Items in the collection do not require treatment and can be used for exhibit and research without prior treatment, archival holdings have been processed for preservation (reboxed, refolded and contaminants removed).

Fair Items in the collection require treatment to ensure on-going conservation or to enable utilization for exhibit or research, only a portion of the archival objects have been processed for preservation.

Poor Artifacts that are extremely unstable, in poor condition, or which require **extensive** treatment either to insure conservation or to enable utilization for exhibit or research. Archival objects have not been processed for preservation.

The second measure reflects the impact of adherence to standards for protection and preservation on actual collection condition. As with other measures a three-point scale is used.

Good The collection is stored in a manner which meets accepted museum/archival standards for storage equipment (proper cabinets, materials coverings, shelves etc), storage environment (light, temperature, and humidity) and security for the given class of collection.

Fair Some aspects of storage, environmental control or security provisions do not meet museum/archival standards.

Poor The collection is stored such that standards of storage, environmental control or security provisions are inadequate and inconsistent with museum/archival standards.

Community Development recognizes that the relative value of collections varies and reflects this value by tiering its collections. Performance measures are not applied to the lowest tiered objects within collections.

2.2.5 Heritage Exhibits - Physical Condition

Community Development operates a network of 18 heritage buildings and museum facilities. These range in size from major museums to a single historic building. As a means of interpreting the significance of these sites, the department has developed a wide range of galleries, exhibits and audio/visual presentations. The department measures the condition of these interpretive facilities using a three-point scale. Among the range of systems evaluated are exhibit lighting, graphic and text panels including way finding signage, audio visual presentations and equipment, exhibit surfaces and finishes.

Good Exhibit systems are functional and require only regular maintenance.

Fair Exhibit systems require service, upgrading or renewal, but still function.

Poor Exhibit system(s) are obsolete and/or not functional.

2.2.6 Target and Results

Table 8
Physical Condition
Owned Infrastructure
2000-01

Category of Infrastructure	Notes	Replacement Value ($Millions)	% of Total	2000-01 % Rated as Acceptable	2001-02 Target % Rated as Acceptable
Buildings					
Social Housing		1,519		99%	
Government Buildings	*1*	2,964		97%	97%
Heritage Buildings	*2*	58		31%	
Total Buildings		**4,541**	**14.6%**	**97%**	
Transportation					
Provincial Highways		19,600		**95%**	**95%**
Bridges		1,613		**84%**	
Total Transportation		**21,213**	**68.0%**	**94%**	
Water Management		**4,300**	**13.8%**	**96%**	
Aggregated Infrastructure		**30,054**	**96.3%**	**95%**	
Historical Collections		287	0.9%	N/A	
Heritage Exhibits		70	0.2%	N/A	
Other		790	2.5%	N/A	
Total - Owned Infrastructure		**31,201**	**100%**		

1. The percentage of buildings rated as 'in acceptable condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life.
2. Most heritage buidlings are acceptable, the low rating is attributed to the high value and poor rating of the Turner Valley Gas Plant and Bitumont.

2.3 Utilization Performance Measure

Measure
Percentage of infrastructure whose utilization is within targeted capacity.

Rationale
Intention of the measure is to determine the number of facilities that are well utilized. Significant over-utilization or underutilization may indicate the need to construct, reconstruct, rehabilitate, or dispose of facilities.

Scope
Includes measures of actual vs. targeted utilization of facilities or structures (e.g., percentage occupied, flow rate, volume of water conveyed/stored).

Methodology
Utilization level is the percentage of the replacement value of physical infrastructure that is utilized within the targeted capacity. Targeted capacity is different from design capacity as expansions/redesign may have adjusted available service capacity. Targeted capacity may differ from 'rated capacity' as a result of program decisions as to how the facility is to be used.

Each Ministry will develop measures of target and actual utilization that are appropriate to the use and type of infrastructure.

Following is a more detailed description of how these definitions have been applied for each type of owned infrastructure for 2000-01.

2.3.1 Building Infrastructure - Utilization

Infrastructure Buildings
The measure is the percentage of buildings with utilization between 75 percent and 100 percent. The measure is based on the ratio of allocated useable space to total useable space. Space may be allocated to a government department, board, agency or commission, to government supported organizations (e.g., health authority, school board, post secondary institution) or to a non-government user (for example, facilities which are being retained, but for which there are no current government requirements).

The measure includes all government buildings over 1000 m^2. The measure excludes government owned health facilities which are operated by health authorities. These are included with supported health facilities. The measure is calculated on the basis of inventory data that is maintained by Infrastructure and verified annually by client departments.

Lands and Forests Buildings - Utilization
This measure is under development. It is primarily intended to address smaller buildings associated with Parks and Land and Forest programs. The current proposal under review is:

- Seasonal facilities generally will be rated at 100% unless the structure is no longer in use.
- Full-time use facilities rated as % of floor space allocated actually being used or how much additional space is being rented, etc.

Social Housing - Utilization
This measure is the percentage or all social housing facilities that are occupied by approved tenants. The measure is calculated on the basis of monthly vacancy information that is submitted by management groups and bodies.

Heritage Buildings - Utilization
The government standard for utilization relates actual use to targeted capacity. For heritage structures and collections, the concept of "targeted capacity" has less relevance; structures are deemed historic without reference to their size. Where visitation exceeds a building's capacity (as is often the case with some of the smaller structures at the Ukrainian Village), staff control access. Of more importance is the "usability" of a structure or collection. The measure of utilization within target indicates the percentage of buildings and structures that are 'good' or 'fair' according to the following definitions.

Good	Building/Structure is fully operational and accessible to the public.
Fair	Building/Structure is safe, and available for public visitation, but only under controlled circumstances.
Poor	Building/Structure is unsafe, or otherwise not accessible by the public.

2.3.2 Transportation Infrastructure - Utilization

Highways
Utilization of provincial highways is defined by the percentage of the network that is equal to or better than a targeted level of service (LOS). If a highway meets or is better than this targeted level, it is being utilized as planned. The targeted LOS for provincial highways is C, as that matches design limits. LOS is an international measure based on the ability of traffic to move freely. The scale is A to F, with A representing no restrictions on flow and F representing a breakdown of flow.

	Results	Minimum Business Plan Measures		
	2000-2001	2001 – 2002	2002 – 2003	2003 – 2004
Provincial Highways (% of highways with LOS C or better)	98+	98	98	98

Bridges and Structures - Utilization
As bridges form an indivisible part of the overall highway network, the highway utilization measure includes the bridge component.

2.3.3 Water Infrastructure - Utilization

This measure is based on meeting the multipurpose use of government owned and operated Headworks systems as outlined in their licensing requirements. The measure applies only to the Headworks systems that represent about 70% of the infrastructure replacement value in this category. This is a change from the way in which the measure was calculated in 1999-00 and better reflects utilization of the infrastructure and is consistent with the measure used for provincial highways.

Utilization is not a relevant measure for other types of non-headworks water management structures (e.g. flood control, lake stabilization). This type of water management infrastructure is important as it is developed for protection, maintenance or enhancement purposes however; its utilization is dependent upon variable environmental conditions that are not addressed under the utilization performance measure.

Utilization of water management infrastructure is defined as the percentage of the Headworks systems that are able to convey the design flow (target value) which is required to meet the needs of consumptive users. If the Headworks system meets, or possibly exceeds, the target value, it is being properly utilized.

2.3.4 Heritage Collections - Utilization

The measure of utilization within target will indicate the percentage of the collections that are 'good' or 'fair' according to the following definitions.

Good	Collection is accessible to the public; storage, labeling, and electronic record keeping associated with the collection are complete and consistent with museum/archival standards. For archival collections, greater than 80% of the collection is described according to the *Rules for Archival Description*.
Fair	Collection is accessible only with some assistance; storage, labeling, and associated electronic record keeping are only partially consistent with museum/archival standards. For archival collections, between 50 and 79% of the collection is described according to the *Rules for Archival Description*.
Poor	Collection is difficult to access; storage; labeling and electronic records associated with the collection are inconsistent with museum standards making the collection difficult to utilize. For archival collections, less than 50% of the collection is described according to the *Rules for Archival Description*.

2.3.5 Heritage Exhibits - Utilization

The department currently utilizes performance measures that relate to the quality of visitor experience. These are customer satisfaction with exhibits and audio/visual presentations, and a visitor's assessment of knowledge gained through a visit. Data for these measures are gathered through annual surveys. The measure of utilization within target will indicate the percentage of the exhibits that are 'good' or 'fair' according to the following definitions.

Good The exhibits meet or exceed targets for these measures.

Fair The exhibits meet or exceed targets for 1 or more of these measures.

Poor The exhibits fail to meet targets for any of these measures.

2.3.6 Overall Target and Results

Table 9
Utilization
Owned Infrastructure
2000-01

Category of Infrastructure	Notes	Replacement Value ($Millions)	% of Total	2000-01 Results % Within Target	2001-02 Target % Within Target
Buildings					
Social Housing		1,519		96%	
Government Buildings		2,964		89%	89%
Heritage Buildings	*1*	58		31%	
Total Buildings		**4,541**	**14.6%**	**91%**	
Transportation	*2*	**21,213**	**68.0%**	**98%**	**98%**
Water Management	*3*	**2,980**	**9.6%**	98%	
Aggregated Infrastructure		**28,734**	**92.1%**	**96.8%**	
Water Management - Non-Headworks		1,320	4.2%	N/A	
Historical Collections		287	0.9%	N/A	
Heritage Exhibits		70	0.2%	N/A	
Other		790	2.5%	N/A	
Total - Owned Infrastructure		**31,201**	**100%**		

1 Most heritage buildings are acceptable, the low rating is attributed to the high value and poor rating of the Turner Valley Gas Plant and Bitumont.

2 Includes provincial highways, bridges and structures.

3 Excludes non-headworks water management infrastructure for which utilization is not a relevant measure.

2.4 Functional Adequacy Performance Measure

This section outlines the government-wide definition, rationale and criteria for development of functional adequacy performance measures as well as specific measures developed for each type of infrastructure and the methodology used in applying the measures.

Measure
Percentage of infrastructure that provides acceptable functional service.

Rationale
Infrastructure may be in good physical condition with sufficient available capacity to meet demand, but poor physical layout or inefficient design may reduce operational usefulness or efficiency.

Scope
Assessments of whether infrastructure is able to meet program requirements or provide an adequate level of service. Poor physical layout (i.e. ergonomics), inefficient design (i.e. high operating costs), and converted use facilities may contribute to functional inadequacies.

The measure may include suitability of location and ability to meet present and future program requirements. For example, poor location may result in underutilization.

Methodology
Facilities will be rated as acceptable or unacceptable.

Following is a more detailed description of how these definitions have been applied for owned infrastructure for 2000-01:

2.4.1 Building Infrastructure - Functional Adequacy

Infrastructure Buildings
The measure is the percentage of buildings that meet the current and anticipated functional program requirements for the occupying department. Functional adequacy also take into account the suitability of the location. All buildings over 1000 m^2, in gross area, are included in the assessment. Assessment of functional adequacy of a building as a whole is based on general criteria and the knowledge and discretion of Infrastructure staff in consultation with program departments. In future years, a methodology based on more detailed criteria will be developed.

Lands and Forests Buildings - Functional Adequacy
This measure is under development. It is primarily intended to address smaller buildings associated with Parks and Land and Forest programs. The current proposal under review is:

- Acceptable - structure meets all applicable codes, is suitably located, meets current needs and is of sufficient size and composition to serve the intended need.

- Unacceptable - structure does not meet one or more applicable codes, or is not suitably located, or does not meet current needs and is of insufficient size or composition to serve the intended need.

Social Housing - Functional Adequacy
The measure is the percentage of all social housing buildings that meet the current or anticipated social housing functional program requirements. Assessment of functional adequacy is based on the knowledge and discretion of Community Development, Housing Advisors in consultation with the management bodies administering the property.

Heritage Buildings - Functional Adequacy
For heritage buildings, acceptable functional service is defined as public accessibility. This measure repeats that for utilization. The measure of acceptable functional adequacy indicates the percentage of exhibits that are 'good' or 'fair' according to the following definitions.

Good	Building/Structure is fully operational and accessible to the public.
Fair	Building/Structure is safe, and available for public visitation, but only under controlled circumstances.
Poor	Building/Structure is unsafe, or otherwise not accessible by the public.

2.4.2 Transportation Infrastructure - Functional Adequacy

Highways
Functional adequacy is defined by the percentage of road infrastructure that is rated as meeting target criteria. A provincial highway is functionally adequate if the roadway is a standard width and if the traffic is unrestricted by speed postings due to geometrics or road bans. Complete data for this measure is unavailable at this time.

Bridges and Structures - Functional Adequacy
The measure is the percentage of bridges and bridge size culverts with a sufficiency rating of better than 40% which is equivalent to fair or good functional adequacy. The measure encompasses all bridges and culverts in the provincial highway system. This measure is done as part of the bridge inspection process. Independent consultants who have been certified by Infrastructure carry out the bridge inspections.

2.4.3 Water Management Infrastructure - Functional Adequacy

- Water Management Infrastructure that does meet current Dam and Canal Safety Guidelines or is in an appropriate location or has adequate water supply. — Acceptable

- Water Management Infrastructure that does not meet current Dam and Canal Safety Guidelines or is in a poor location or lacks water supply. — Unacceptable

The Dam and Canal Safety guidelines issued by Environment provide information as to how the Water Act Regulation for Dam and Canal Safety is administered. The purpose of the regulation is to promote the safety of dams and canals primarily to prevent loss of life and secondary, economic losses due to failure of the structures. A dam of at least 2.5 m high and having at least 30,000 cubic metres in reservoir capacity and a canal conveying at least 15 cubic metres per second with an embankment of at least 2.5 m high are governed by the regulation. Other structures may be considered at the discretion of administrator of the regulation. The regulation notes requirements the licensee needs to address for the safety of any person or property affected or likely to be affected by a dam or canal. These requirements cover but are not limited to; inflow design flood, spillway capacity, freeboard allowance, dam stability, and incremental consequences of failure. The Guidelines in conjunction with the Water Act Regulation help to determine the Functional Adequacy of water management infrastructure.

Poor location and/or lack of water supply also affects functional adequacy of water management infrastructure. Sufficient water supply may no longer be available within a certain area due to (say) climate change resulting in a change to the infrastructure functional adequacy even though the water supply objective or demand may not have changed. A change in the course of a river due to (say) a flood could change the functional adequacy of the infrastructure located on that river.

2.4.4 Heritage Collections - Functional Adequacy

As with collection condition, the functional adequacy of Heritage Collections consists of two components. The first measures the functional adequacy of the items within a collection through the application of a three-point scale. The final rating is given as the percentage of items within a given collection meeting the given performance standard. The percentage is calculated in terms of replacement value and is the percentage of the collection that is 'good' or 'fair' according to the following definitions. (Performance measures for archival holdings of the province with respect to the adequacy of the collection are still under discussion.)

Good The collection is an excellent representation of the functional group, no major gaps in time period or locality are present. Further collection, beyond regular annual collecting activity is not needed. Less than 10% of the collection requires de-accessioning due to inadequate provenance or extremely poor condition.

Fair The collection is an adequate representation of the functional group, but has significant gaps in time period or locality. Further collection is needed to make the collection fully functional. 10-30% of the collection requires de-accessioning due to inadequate provenance or extremely poor condition.

Poor The collection is an inadequate representation of the functional group. Significant collecting is required to make the collection fully functional. Greater than 30% of the collection requires de-accessioning due to inadequate provenance or extremely poor condition.

The second component measures the functional adequacy of the facility in which the collection is stored, from a collection use and growth perspective and is the percentage of the collection that is 'good' or 'fair' according to the following definitions.

Good The collection storage area allows for significant collection growth (6-10 years). All aspects of the collections functional group are contained within the storage area, and the storage area's layout and proximity to staff allow for proper and functional use of the collection location.

Fair The collection storage area allows for some collection growth (1-5 years). Some aspects of the collection storage area are inadequate, separated from staff or inefficient.

Poor The collection storage area does not allow for significant collection growth. The collection storage area's layout and location is such that the collection is disjunct and separated from staff, and the space is otherwise inadequate and difficult to utilize.

For reporting purposes, the lowest rating of the two measures is reported.

2.4.5 Heritage Exhibits - Functional Adequacy

For Heritage Exhibits, acceptable functional service is defined as the exhibits ability to reflect current historiography or scientific thinking, to be attractive and informative to the visiting public. Generally speaking, research trends within historic or scientific communities, and changes within the discipline of exhibit design and information presentation are such that exhibits and interpretative presentation can be expected to remain current for a period of no more than ten years. The performance measure for functional adequacy is a reflection of the given exhibits years of service. Exhibits that provide acceptable service are those that are 'good' or 'fair' according to the following definitions.

Good	Exhibit is between 1 and 5 years of age.
Fair	Exhibit is between 6 and 10 years of age.
Poor	Exhibit is greater than 10 years of age.

2.4.6 Target and Results

Table 10
Functional Adequacy - Owned Infrastructure
2000-01

Category of Infrastructure	Notes	Replacement Value ($Millions)	% of Total	2000-01 Results % Providing Acceptable Service	2001-02 Target % Providing Acceptable Service
Buildings					
Social Housing		1,519		99%	
Government Buildings		2,964		78%	79%
Heritage Buildings	*1*	58		43%	
Total Buildings		**4,541**	**14.6%**	**85%**	
Transportation					
Provincial Highways	*2*	19,600		87%	
Bridges		1,613		93%	
Total Transportation		**21,213**	**68.0%**	**87%**	
Water Management		**4,300**	**13.8%**	**99%**	
Aggregated Infrastructure		**30,054**	**96.3%**	**89%**	
Historical Collections		287	0.9%		
Heritage Exhibits		70	0.2%		
Other		790	2.5%		
Total - Owned Infrastructure		**31,201**	**100%**		

1. Most heritage buildings are acceptable, the low rating is attributed to the high value and poor rating of the Turner Valley Gas Plant and Bitumont.

2. Functional Adequacy measure is being revised as a result of the addition of secondary highways and urban links to the primary highway system. Measure is based on 1999-00 data.

Strategy 3

Supported Infrastructure

STRATEGY 3 - SUPPORTED INFRASTRUCTURE

1. Introduction

Purpose

The strategy for the Supported Infrastructure Task Group was to:

> ***"Develop a strategy for design and implementation of an IMS for supported infrastructure".***

Specific targets were to:

- Identify current IMS systems that exist for supported infrastructure by March 31, 2001.
- Develop and initiate implementation of a strategy for collection of baseline data for supported infrastructure by December 31, 2000.

Process

The Task Group carried out the following work to identify current provincial IMS systems:

- Each department provided a preliminary overview of the significant supported infrastructure facilities (including some information on infrastructure condition).
- A data template was developed to capture consistent information on IMS systems administered by provincial departments.
- Each department provided IMS systems information in the template format to provide a mechanism for inventory and comparison.
- Each department estimated the percentage of data capture completed, the estimated date for data capture to be completed, the percentage of support by the province for the infrastructure, the future system investment required, the ongoing cost to maintain the system, the ongoing cost to maintain the data and the status of the system.

Since a review of current provincial information on municipal infrastructure management systems showed serious gaps, Municipal Affairs included identification of significant municipal IMS as a component of Phase 1 of the Municipal Infrastructure Management Systems (MIMS) project.

Following are the steps to develop and implement a baseline data collection strategy:

- The data template showed that for most areas of supported infrastructure (schools, hospitals, etc.) most condition information and some utilization information had already been collected.
- Each responsible department then identified its strategy to collect the remaining required baseline data. For example, Community Development maintains the infrastructure inventory for Heritage Buildings. Community Development plans to continue to inventory and maintain the inventory data for all designated sites (420 plus sites).
- The information held by the Province on municipal facilities (roads, sanitary sewer and water facilities, stormwater facilities, buildings, solid waste facilities, etc.) is incomplete. The amount of information ranges from good condition information on major sewer and water treatment facilities and major rural roads to nothing for other infrastructure.
- A strategy was implemented to collect the required baseline data on municipal infrastructure by working with the municipal associations on developing a Municipal Infrastructure Management System (MIMS). Municipal Affairs and Infrastructure also funded the Rural Road Study Initiative, which is collecting consistent information on municipal roads and bridges.
- Additional infrastructure management systems exist for supported infrastructure that are owned and maintained by organizations such as school boards and regional services commissions. These may include IMS systems for the following types of infrastructure:
  - health facilities,
  - schools,
  - post-secondary education facilities,
  - social housing,
  - irrigation,
  - drainage,
  - water,
  - sanitary sewer,
  - solid waste,
  - roads, and
  - municipal buildings.

Some of these infrastructure management systems currently overlap, or will overlap with provincial IMS systems in funding and/or coverage. Discussion is required with the organizations that currently own or are developing an IMS for management of their supported infrastructure. The feasibility and utility of combining these systems with provincial IMS systems needs to be investigated.

2. IMS Summaries - Supported Infrastructure

Following is a summary of the infrastructure management systems in place for each type of supported infrastructure. See Appendix 1 for further details.

Irrigation Works
The Irrigation Infrastructure Management System (IIMS) is jointly owned by AFRD and the Irrigation Districts. The purpose of this IMS is to maintain the inventory and condition evaluation of irrigation infrastructure and to track government support funding. The system is also utilized in priority setting for replacement and upgrading of irrigation infrastructure. Approximately 90% of the inventory data capture is completed and 5% of condition evaluation data is captured.

The measures for physical condition and functional adequacy are the same as those for owned infrastructure. The measures for utilization vary slightly from owned infrastructure and will be based on the number of acres irrigated as a percentage of number of acres assessed.

All 13 Irrigation Districts participated with AFRD (through representatives from an umbrella group) in the development of the IMS fundamentals, and have agreed to gather the information required. Collection of the actual data will commence in early 2001 and will continue for several months, since the different irrigation districts have varying degrees of technical capability to obtain the required information. The Irrigation Branch and Irrigation Secretariat from AFRD will continue to closely work with the 13 districts until this project is completed.

Schools
The School Facilities Data System (SFDS) is owned by the Province. The purpose of the SFDS is to maintain inventory and financial information on 1463 school buildings owned by school boards. The system is used as a planning and priority setting tool. A review of the SFDS is currently underway, with the purpose of merging existing school inventory and financial data into an overall IMS system for the Property Development Division of Infrastructure. The new system, the Building and Land Inventory System (BLIMS), is currently under development with a target date for completion of March 2002. BLIMS will include all owned and supported infrastructure managed by the Property Development Division.

The SFDS contains 100 percent of the inventory data and 100 percent of the utilization information for school buildings. Infrastructure has also completed condition audits on all 1463 school buildings. All of the available data will be migrated to BLIMS. For the functionality assessment, Infrastructure is currently developing performance criteria that will be applied to schools. This is targeted to be in place by March 2002.

Roads
The Municipal Pavement Management System was adopted by a joint committee involving all cities and Infrastructure, and is owned by the cities. The purpose of this IMS is to monitor pavement condition and determine rehabilitation and reconstruction strategy for paved roads. Approximately 80% of the inventory data capture is completed in the participating cities.

The inventory data that is being collected includes a visual inspection of the physical condition of the pavement. Functionality of these roads is identified as arterial, collector, or local, and is defined by agreement between the city and the province. It is then established in each city's transportation bylaw. Utilization is measured using traffic volumes. This is collected by each city with varying degrees of regularity.

Health Facilities
The Integrated Health Facilities Information System (IHFIS) is owned by the provincial government. This IMS is a planning, administrative and project priority setting tool that is beginning to be used by Health Authorities and Infrastructure to support corporate, strategic decision making and long term planning and programming of major capital expenditures so that optimal use of available funds can be achieved. The information currently in IHFIS will be migrated to BLIMS by March, 2002.

Inventory and facility evaluation data has been captured for 100% of grant eligible health facility infrastructure. Inventory information for non-grant eligible health facility infrastructure will be gathered by September 2002 and represents approximately 15% of the total facility area used to support health programs. 100% of the data required to report on physical condition and functional adequacy of supported infrastructure currently resides in the system.

Physical condition will be determined through a ratio of the deficiency costs to replacement costs by March 2001. On an interim basis, functional adequacy measures will be determined available based on facility age and the date of major functional upgrades by March 2001. By March 2002, functional adequacy will be determined based on a standardized functional adequacy questionnaire.

Data will be gathered by March 2001 on utilization. Utilization will be determined based on the total health facility infrastructure area that is currently vacant or not used to support health programs.

Post-Secondary Institutions
The Financial Information Reporting System (FIRS) is owned by the provincial government. The purpose of this IMS is an inventory, planning and analysis tool. The system is a database of capital asset information from post-secondary institutions. Approximately 90% of the inventory data capture is completed. 100% of utilization data is captured. Infrastructure is currently conducting condition audits on all post-secondary institutions to be completed by March, 2001. This data will be incorporated into BLIMS.

Seniors and Social Housing (owned and supported)
The Housing Information System is owned by the provincial government. The purpose of this IMS is to maintain an inventory of all owned and supported seniors and social housing assets. Approximately 77% of the inventory data capture is completed.

Heritage Buildings (owned and supported)
Community Development is currently maintaining an IMS for heritage building data collection, and will continue to collect information on the 420 plus sites administered by the department. Insufficient information is currently available on what other artifacts, etc. may be in existence and whether it should be inventoried. While Community Development is developing a collections/artifacts system for their owned infrastructure, it appears that no supported infrastructure exists in this area.

Water Management Infrastructure
Environment's Infrastructure Management System (EIMS) was designed as a generic internet based system to function across Environment to address physical infrastructure associated with the Water Management, Parks, and Lands and Forests sectors. The design would allow for organizations and programs dealing with other owned or supported infrastructure, such as the provincially supported Alberta Water Management and Erosion Control (AWMEC) program, to use EIMS. The status of using EIMS by local authorities for the AWMEC program is under review and is partly dependent upon completing EIMS development for government owned infrastructure (CPI-Strategy 2). The current EIMS version will be able to collect data and report information on several types of infrastructure, such as dams, buildings, roads, bridges, etc.

Municipal Infrastructure
The Municipal Infrastructure Management System (MIMS) project is a joint project of Municipal Affairs and Alberta's municipal associations. The objective of this project is to develop an internet (web-based) computer system to assist municipalities in the efficient and effective management of municipal capital infrastructure. The objectives include a system to:

- inventory existing municipal physical infrastructure;
- capture information on the condition, utilization, and functionality of the infrastructure in a standardized format;
- facilitate prioritization of infrastructure upgrading and/or replacement on a needs driven basis; and
- facilitate sharing of information related to the various types of infrastructure.

"Municipal physical infrastructure" includes the following:

- roads and related structures;
- potable water treatment, transmission and distribution systems;
- sanitary sewage collection, transmission and treatment systems;
- storm water management systems;
- solid waste management facilities; and
- municipal buildings.

This initiative is being undertaken in three phases, as follows:

- Phase I – Development of Master Plan/Blueprint
- Phase II – Detailed Design, Development and Implementation
- Phase III – Ongoing Operation and Support

Phase I was started in October 2000 and includes identification of guidelines and condition, utilization, and functionality performance measures for municipal infrastructure management. It will also include reviewing existing infrastructure management tools, including provincial and municipal infrastructure management systems, and determining what modifications might be required to make them suitable for broader use

The strategy for data collection under this initiative includes promotion of the project approach and value to municipalities and municipal associations. The implementation of the data collection strategy will include the testing of the resulting system in specific municipalities. The results of the pilot testing may be used to modify the strategies for data collection on a larger scale.

Special Areas
The Special Areas involve a unique form of local government located in the southeast part of Alberta. The Special Areas were set up under the Special Areas Act in response to the extreme hardship and collapse of local government suffered in the area during the depression years of the 1930's.

The Special Areas Board administers Special Areas. The Board is responsible to provide cost effective, and responsive municipal services, and effective long-term land management.

The Board is responsible for providing the following services (only those involving supported infrastructure are listed):

Service Type	Specific Service	Detail
Municipal Services	Municipal road and street network	Provision of a road network that meets the needs of the Special Areas in terms of both commercial and commuter traffic.
	Hamlet services	Provision of a basic service level to hamlet residents commensurate with population and need.
	Waste management services	Provision of a rural municipal waste collection and disposal system.
	Water management services	Provision of a water management infrastructure system.
Social Services	Seniors Housing	To assist in the provision of cost effective social services within the Special Areas.

Special circumstances surround the ownership of this infrastructure. For the purposes of the CPI, infrastructure within the Special Areas is deemed to be supported. The current status of the IMS is that 100% of building inventory (fixed assets) information has been collected and is being maintained. The system is largely a collection of historical cost information that is depreciated annually for insurance purposes. Minimal condition information is collected, except to identify annual maintenance requirements.

The water management infrastructure will be collected by Special Areas staff and maintained on the Environmental Management System. The collection of this inventory and condition evaluation information has not started. Environment and Municipal Affairs are working with Special Areas staff to develop a strategy for collection of inventory, condition, functionality and utilization information.

Minimal information has been collected on the inventory and condition of the road and street network and no IMS is in place to report on this network. Municipal Affairs is currently funding a rural road study in the Special Areas to assist in the collection of consistent road and bridge infrastructure data. The study is targeted for completion by March 31, 2001.

3. Performance Measures - Supported Infrastructure

The key performance measures that will be used to report on the management of supported infrastructure will be similar to those used to report on comparable owned infrastructure where appropriate. The key performance measures to be used by all ministries with responsibility for supported physical infrastructure are as follows:

Performance Criteria	Measure
Physical Condition	Percentage of physical infrastructure rated as being in acceptable condition.
Utilization	Percentage of physical infrastructure for which utilization level is within targeted capacity.
Functional Adequacy	Percentage of physical infrastructure that provides acceptable functional service.

Specific measures have been developed for some supported infrastructure for the three measures for 2000-01. The same methodology has been used as that used for comparable owned infrastructure.

The following table summarizes the information currently available for each category of supported infrastructure:

Table 11
Status of Data Collection - Supported Infrastructure

Type of Infrastructure	Notes	Baseline Data Collected		
		Physical Condition	Utilization	Functional Adequacy
Irrigation		Partial	Yes	No
Schools		Yes	Yes	Partial
Post Secondary Institutions		Partial	Partial	No
Provincial highways in cities	1	Partial	No	No
Health Facilities		Yes	No	Yes
Social Housing		Partial	Partial	Partial
Designated Heritage Buildings		No	No	No
Water Management	2	No	No	No
Municipal Infrastructure		No	No	No

1. Utilization and functionality data collection to be combined with municipal infrastructure data collection.
2. The majority of water management infrastructure is government owned. The water management infrastructure in the above table applies only to the infrastructure in Special Areas and a few select municipalities.

Conclusion

Each department has outlined the strategies for collection of the remaining significant supported infrastructure data. For some infrastructure the strategy begins with completing the collection of information on the physical inventory. The information currently captured on most IMS systems is physical condition and inventory data, and such systems may need to be modified in order to include more information on condition, functionality and utilization.

For all types of infrastructure, systems need to be upgraded or developed to be able to consistently report on the following:

- the inventory and replacement value of supported infrastructure, and
- condition rating, utilization and functionality.

APPENDIX 1

Table 12

Provincial Infrastructure Management Systems Covering Supported Physical Infrastructure

System Description

System Name	Department / Division	Purpose of System	"Owned by Gov't"; "Shared Ownership"; "Owned by Stakeholder"	Asset Type	Function (e.g. Administration, Inventory)	Stakeholders
Municipal Pavement Management System	Infrastructure/ Transportation and Civil Engineering	Monitor pavement condition and determine rehabilitation/reconstruct strategy	Owned by stakeholder	Roads	Inventory and planning	Cities
Housing Information System	Community Development/ Seniors	Inventory of owned and supported assets	Owned by Gov't	Building	Inventory	Management bodies not-for-profit groups
Financial Information Reporting System (FIRS)	Learning	Database of capital asset information from post-secondary institutions (Colleges, Universities). Every major facility, renovation cost, replacement value, key dates entered by institution.	Owned by stakeholder	Buildings	Inventory, planning, analysis	Alberta Government
School Facilities Data System (SFDS)	Infrastructure/ Property Development	Inventory, Financial Condition Information	Owned by Gov't	Schools	Condition, Utilization, Functionality	Learning, School Boards
Integrated Health Facilities Information System (IHFIS)	Infrastructure/ Property Development	Evaluation of Health Facilities to Support Multi-Year Capital Development and Maintenance.	Owned by Gov't Used by Gov't and Regional Health Authorities	Health Facilities	Planning Administration Inventory, Priority Setting and to support capital expenditure decisions	Health & Wellness, RHAs
Environment Infrastructure Management System (EIMS)	Environment	Inventory, Performance Measures, Financial, Reporting and Decision making system for physical infrastructure.	Owned by Gov't	Water management and other types of physical infrastructure.	Inventory, evaluation, reporting	Local authorities
Municipal Infrastructure Management System (MIMS)	Municipal Affairs / Alberta Urban Municipalities Association / Alberta Association of Municipal Districts and Counties	Inventory and condition evaluation of Municipal Infrastructure Priority setting for upgrade and replacement	Likely Shared Ownership	(a) roads and related structures; (b) potable water treatment, transmission and distribution systems; (c) sanitary sewage collection, transmission and treatment systems; (d) storm water management systems; (e) solid waste management facilities; and (f) municipal buildings.	Inventory, planning Priority setting for maintenance, upgrade and replacement	Municipalities Province
Irrigation Infrastructure Management System (IIMS)	AAFRD RM & I Division Irrigation Council Irrigation Secretariat	Inventory and condition evaluation of irrigation infrastructure Tracking of government support funding	Shared Ownership	Irrigation conveyance canals and pipelines plus return flow surface drains [2] Irrigation water supply dams and reservoirs [2]	Inventory Administration Priority setting for replacement and upgrading	Irrigation Districts Towns Municipalities Processing Industries Wildlife Agencies

[2] Total value of irrigation infrastructure is $2 Billion ($1.5 Billion for canals, pipelines and surface drains; and 0.5 Billion for dams and reservoirs.)

Table 12
Provincial Infrastructure Management Systems Covering Supported Physical Infrastructure
Status of Development

System Name	% of Data Capture Completed	Estimated Date for Data Capture to be Completed	% of Support by Province for Infrastructure	Future System Investment Required	Ongoing Cost to Maintain System	Ongoing Cost to Maintain Data	Status
Municipal Pavement Management System	80%	Spring 2001	75%	No	Yes	Yes	Functional
Housing Information System	77%	March 31, 2001	75%	$50,000	$50,000 / yr	$150,000/yr	Active
Financial Information Reporting System (FIRS)	90%	31 March 2001	40%	$500,000	$200,000/yr	$100,000/yr	Active
School Facilities Data System (SFDS)	100% 100% 0%	March 2002	100%	Unknown	Unknown	Unknown	Development Under Review
Integrated Health Facilities Information System (IHFIS)	Inventory and Evaluation100% Utilization Functional Adequacy * Non grant eligible (P3) facility data	Current data from 1998-1999. Data will be updated on Feb. 2001. March 2001 100% resides in IMS updated by Feb. 2001 Collected by 2002	100% but some funding from private sector	0	0	Unknown	An interim solution was developed to allow RHA's to prepare 2001-2002 capital upgrading requests.
Environment Infrastructure Management System (EIMS)	Presently no as-built data is captured under the AWMEC program	N/A	AWMEC program provides 65% up to a maximum of $275,000 per project.	See Note 1[1]	See Note 1	See Note 1	Under Review
Municipal Infrastructure Management System (MIMS)	0%	2005	0%	0%	0%	0%	System blueprints in progress
Irrigation Infrastructure Management System (IIMS)	90% of inventory 5% of condition evaluation	March 2003	75% for infrastructure rehabilitation [3]	$0.5 Million	$0.15 million per year [4]	$0.35 million per year [4]	In progress

[1] Changes to the present reporting requirements for the government supported Alberta Water Management and Erosion Control (AWMEC) program are needed to readily allow EIMS to capture the required infrastructure data. Future EIMS investment and costs are unknown at this time, however, the majority of EIMS software development necessary to capture AWMEC data is funded under the Capital Planning Initiative – Strategy 2 for government owned infrastructure.

[3] AAFRD currently provides $17.2M towards infrastructure rehabilitation. Irrigation districts use significant amounts of their own funds for additional rehabilitation requirements.

[4] Total cost, shared between the Irrigation Districts and AAFRD.

Strategy 4

Public-Private Partnerships

STRATEGY 4 - PUBLIC-PRIVATE PARTNERSHIPS

1. Introduction

Purpose

The purpose of the Task Group was to:

> ***Identify opportunities for, and encourage, private sector provision of physical infrastructure and related services where necessary criteria are met.***

Process

The Task Group carried out the following work:

- Reviewed the established policy framework.
- Met with program managers in each infrastructure area and reviewed past and current projects to understand the P3 and alternative service delivery (ASD) experience in the Alberta Government and any impediments to the pursuit of P3 projects.
- Examined assessments of P3 activities in British Columbia and Nova Scotia.
- Reviewed principles and best practices guidelines that have been developed by the Governments of Canada, New Brunswick, Nova Scotia, British Columbia, and the North West Territories.
- Participated in forums to exchange experiences with practitioners from various levels of government, including the Canadian Council of Public-Private Partnerships and a cross-government closed forum on public-private partnerships.

2. Alberta Government Experience With Public-Private Partnerships

Following is a description of the 3P and ASD initiatives that were initiated or completed in 2000-01 and progress that has been made in addressing issues.

Alberta Research Council

A new research facility for the Alberta Research Council (ARC) was completed. The facility was procured through a design-build-own operate lease (DBOOL). A P3 arrangement was chosen because

- the building that ARC occupied could not meet their future needs
- capital funds were not readily available through the normal budgeting process
- ARC needed a solution before the existing lease expired.

- In 1997 a bridging consultant was appointed to work with Infrastructure and ARC to assess the tenant needs and prepare drawings and specifications.
- A public request for qualifications was issued to assess interest and capability to pursue a DBOOL arrangement. Three of the 12 firms responding were short-listed
- Proponents were issued the Statement of Requirements in the Request for Proposals and provided a $15,000 honorarium to assist in offsetting the costs of preparing their proposals.
- A two-stage evaluation was established which involved the assessment of both the technical and financial aspects of the submissions. This process allowed the contract to be awarded to the proponent who tendered the best value proposal rather than the one with the lowest price.
- The successful private joint venture constructed and assumed ownership of the new facility and leases the Crown-owned land on which it is situated. Infrastructure agreed to lease the facility for a 12-year term with an option to purchase the facility after the 10th year.
- The project is considered a success because of :
  - The minimal capital funds required from the Government.
  - The clarity of the process and its acceptance by the client department and the private sector participants.
  - The faster method of delivery compared with the traditional tender process.

- A debriefing of the entire process following completion provided an opportunity to identify how the process could be improved in the future, including:
  - The need to assess the tradeoff between specific requirements and opportunity for private sector innovation and ingenuity.
  - The need for a partnering session early in the process to build trust and teamwork.

Federal Building

The initiation of another P3 arrangement for the private sector redevelopment of the Federal Building. The intention is to retrofit the building and the surrounding site under a 99-year lease arrangement. The proposals must satisfy requirements for compatibility with the adjacent Legislative Grounds and maintain specific characteristics of the building. The proposals are not to be based on any occupancy by the Alberta Government.

Following are the steps taken to initiate the Federal Building project:

- A ministerial appointed review committee was established in early 2000 with representatives from professional and industry associations to oversee the process.
- The developer selection used a two-stage Request for Qualifications (RFQ) and Request for Proposals (RFP) process. The RFQ was used to select firms that had the skills and expertise that were required for the project. Evaluation of the proposals is based on technical merits as well as the rental return to the Province.
- Proponents are required to provide a $1Million Letter of Credit to assure performance and because of this no attempt is being made to evaluate the business case of any the proposals.
- No public sector comparator is being used in the process, as public redevelopment is not an option.

2.2 Health Facilities

- In 1999-2000, $115 Million was allocated over four years to enable six Regional Health Authorities (RHA's) to develop additional long-term care service capacity and replace older long-term care infrastructure.
- The government also approved, in principle, the use of partnerships between RHA's and the private or voluntary sector to develop approved long-term care infrastructure. Under these partnerships a private or voluntary sector partner designs, builds and finances the construction of approved infrastructure that will operate under the Nursing Home Act or The Hospitals Act. The partner owns the infrastructure and is given contracted responsibility for ongoing program delivery.
- The option of a P3 approach for developing continuing care and supportive living facilities was endorsed because:
  - Private and voluntary organizations have historically provided a significant portion of continuing care facilities in Alberta, particularly in Edmonton and Calgary.
  - There was substantial need for upgrading and replacement of existing facilities.
  - The aging population was increasing demand for facility-based care.
  - There was significant competing demands for government funds for other types of infrastructure.
- While the Government is not a partner in these projects, a statement of principles and financial arrangements and reporting requirements associated with the P3 projects has been negotiated between Health and Wellness and Infrastructure. Key principles include:
  - Approval will only be given to high provincial priorities.
  - A benefit to Albertans must be established on the basis of an evaluation of alternative solutions.
  - A sound business case must be established for each project.
  - Risk factors must be clearly identified and arrangements for assuming responsibility for them, mitigating and managing them in place.
  - A process for implementing the P3 arrangement must be established in advance.
  - Contractual arrangements must protect the public interest and investment in the infrastructure.

- Both metropolitan RHAs have concluded P3 project arrangements.
  - Each called for expressions of interest from the private and voluntary sectors and received 30 to 40 responses. These were short-listed and interviewed, proposals requested from about ten organizations of which seven were selected.
  - There was a concern that the process be open and fair. Project review teams included representatives from outside organizations.
  - Provincial support is deposited in the Government's Consolidated Cash Investment Trust Fund (CCITF) and drawn down by the RHA's as required. Funding is provided to partners in two forms:

    - Supplementary Capital Payments. Partners are paid on a per diem basis over the term of a contractual agreement.
    - Forgivable Mortgage. Funds are provided up front to the partner, registered as a mortgage and forgiven over the term of a contractual agreement.

    In both cases, the non-government partner owns the facility at the end of the project.

- The projects required the development of several contractual agreements between the RHA's and the partners (the government is not a party to these contracts), including:

  - Project Development Agreement that specifies the nature of the requirements for infrastructure to be developed.
  - Program Services Agreement that lays out the service delivery requirements.
  - Master agreement that governs the overall partnership arrangements.

  These agreements are reviewed and approved by the Ministers.

- Projects have also been approved in rural health regions that are also more cost effective than government provision of infrastructure.

- In all these projects, Health and Wellness and Infrastructure are responding to RHA identified health needs and not to unsolicited private sector proposals. The Departments are asking RHAs to look at partnership alternatives for the development of other types of infrastructure (e.g., community health centres).

- Significant cost savings were achieved by using a P3 approach. In Calgary, Infrastructure estimated that the 443 beds would have cost $70 Million if the Government had developed them. The four P3 projects came in at $33.2 Million. The Edmonton P3 costs were even lower at $15.8 Million for 240 beds.

- The lower costs are attributed to different standards of construction, equity contributions from partners and integration of supportive living units in projects to take advantage of health services associated with continuing care.

- There are opportunities to extend the P3 arrangements employed for long-term care facilities to other health facilities:

  - The Long Term Care Review Policy Advisory Committee final report in November 1999 identified pressure points in Alberta's continuing care system related to Alberta's aging population.
  - The Calgary Regional Health Authority announced plans in 2000 to replace the Colonel Belcher Veteran's Centre through a partnership arrangement with a private developer. The public financial contribution may be raised through the sale of surplus properties.
  - Two RHAs are investigating opportunities for the development of community health and acute care facilities using P3 arrangements.
  - Some RHAs have lobbied to obtain support for projects that are not provincial priorities based on the prospect of financial contributions from partners.

- There is a need to develop a clear government policy on the use of P3 procurement arrangements and to develop processes and guidelines to assist RHAs to ensure consistency of process for projects across the province.

2.3 School Facilities

P3 projects for school facilities have generally been initiated by the private sector. Developers are interested in investing in school facilities because the availability of schools in a new sub-division increases the commercial value of the housing. There have been a number of successful school projects using public-private partnerships. There are three projects currently under consideration:

- Carl Safron School in Calgary. This is an historical school in downtown Calgary. A consultant has been hired to look at options for disposition. If successful, sufficient revenue may be generated to provide a primary school for the area.

- Proposed Catholic School in Callingwood, Edmonton. This is a private sector initiative to build and finance a school next to a new grocery store on school reserve land.
- Twin Brooks School, Edmonton. This is a proposal to build a joint Public-Catholic school with some community facilities.

There are a number of practical policy issues that require resolution in order to provide an environment that will encourage private sector investment in school facilities. These include:

- Whether involvement of the private sector in a school project will increase the priority of the project
- The level of financial support that the Government will make to the construction costs
- The process to ensure that the local school board will agree to operate the school once it is built.
- Whether build-leaseback is a financing option for any school projects.

2.4 Highway Infrastructure

Over the past five years, the Province has contracted out highway road maintenance and road and bridge design. In November 2000, highway maintenance contracts in southern Alberta were retendered and amalgamated to include the secondary highway system. The average maintenance cost was reduced from $5,800 per kilometre to $3,800 per kilometre.

3. Review of Experiences in Other Jurisdictions

On the basis of its review of experience in other Canadian jurisdictions, assessments of that experience and best practice and guidelines developed in those jurisdictions, the Task Group identified the following factors as being key success factors that need to be addressed in the pursuit of public-private partnerships.

Commitment to Specific Objectives for P3 Initiatives

- There are significant benefits to P3 procurement aside from being a source of financing. These include:
  - Reduction of capital and operating costs
  - Take advantage of innovative technologies operating methods, and solutions
  - Achieve economies of scale by partnering with existing private operations
  - Fast track construction.
  - Take advantage of private sector's marketing abilities.
  - Streamline administration, Improve programming and facility usage with one service provider and achieve price stability and uniformity.
  - Reduce risks to the public sector (e.g., environmental, inflation, demand, technology, design, construction , operations).
  - Realize the full value of the asset on disposal by avoiding large renovation costs
  - Avoid expropriation.
  - Provide a mix of development possibilities

- Obtaining these benefits requires that there be a clear understanding of the circumstances in which P3s will be supported and objectives being pursued

- Objectives also permit a review of all major project initiatives to determine whether P3 procurement is appropriate.

Governance

- A clear signal of political support and government commitment is required before the private sector will be willing to make the significant investment that is required to pursue P3 initiatives.

- Senior levels of the Ministry must be involved in encouraging P3 projects and in resolving impediments to the process

- A high level cross-government coordinating committee with representatives from infrastructure, justice and treasury ministries will assure the constant and successful development and implementation of an overall P3 strategy.

- A review committee of senior staff within the Infrastructure ministry should be designated to take ownership of P3 policy and guidelines.

- External and private sector representatives should be involved in the process to assure the integrity of the project review process.

A Comprehensive Policy Framework

- Policy, legislative and regulatory issues need to be worked out as early as possible.

- The framework should be developed outlining the commitment to and objectives for P3 projects as well as the principles upon which P3 projects will be pursued.

- The framework should also address
  - respective roles of the public and private sector;
  - acceptable revenue streams
  - treatment of unsolicited proposals
  - conditions or circumstances that may preclude P3 projects

A Clear Process for Approval, Implementation and Monitoring of P3 Projects

- A fair and open process with clear evaluation criteria, and procedures, is critical to the acceptance of P3 initiatives by the public and success within the public sector.

- The public service needs to be provided with the necessary training to meet the challenges of P3s.

- Arrangements need to be made for external specialists (e.g., public affairs, finance, legal and risk management) that may be required to assist the project teams throughout implementation which are not normally part of the traditional procurement process.

- An outline of the pre-planning, planning and budgeting processes which occur within government on projects and the extent to which these may be altered for P3 projects (e.g., response to unsolicited projects).

- Details of the selection process, usually involving a Request for Qualifications and a Request for Proposals, to select financially sound and technically qualified firms and evaluate the proposals must be worked out.

A Framework for Evaluating P3 projects to assure that value for money is obtained and other social and economic benefits are assessed.

- There needs to be a clear evaluation framework to assure that value for money is obtained and other social and economic benefits are assessed. This should include consideration of financial, technical and operational conditions, public acceptability, as well as implementation and timing considerations.

- Guidelines need to be developed on the criteria for selection of partners, and risk assessment and allocation among partners to assure that the process is and, is seen to be, fair, open and equitable.

- A public sector comparator should be required to assess the benefits of pursuing a P3 approach.

4. Conclusion

The government has increased its participation in P3 projects in both owned and supported infrastructure. Following is a summary of the types of P3 arrangements and recent projects that have been undertaken:

Type of Private Sector Provision	Project
Alternative Service Delivery	▫ Property Management ▫ Highway Maintenance ▫ Facility Maintenance ▫ Design and Construction of Highways and Bridges
Alternative Facility Procurement	ARC Calgary
Alternative Program Delivery	Extended Care Health projects
Alternative Facility Disposition	Carl Safron School, Calgary

The use of and experience with P3 projects and alternative service delivery for the provision of infrastructure has increased significantly and there are good prospects for additional projects. Frameworks have been developed in the some infrastructure areas to facilitate these projects and there have been a number of successful projects from which a body of expertise has been developed. There is a need to expand and refine this framework, to share the developed expertise by defining specific criteria for evaluation of 3P and ASD projects, and to develop specific guidelines for successful implementation.

Strategy 5

Divestiture of Surplus Properties

STRATEGY 5 - DIVESTITURE OF SURPLUS PROPERTIES

1. Introduction

Purpose

The overall strategy for this Task Group was to divest properties that are no longer required for government programs.

The target is:

> ***For 2000-01 to sell $35 million of surplus properties at fair market value by March 31, 2001.***

Process

- The Task Group reviewed all Infrastructure-owned and Environment-owned properties over 1,000 m^2, where building operating costs exceeded $60,000 per annum or utilization was 60% or less (including all vacant properties).
- Five Infrastructure-owned buildings were targeted for specific review.

2. Identification and Disposal of Properties

Infrastructure-owned Properties

- Infrastructure is on target to sell $35 million of surplus properties by March 31, 2001.

- Many of the properties that meet the sub-committee criteria, are used by non-government organizations and may not be good candidates for disposal; or may require the development of alternate accommodation plans for existing occupants before disposal action can occur. As the Committee's role is not to replace the existing accommodation planning process that already exists in Infrastructure, the Committee referred all properties meeting the agreed criteria noted above but which are currently occupied by non-government users, to Property Development. Property Development will provide a report(s) with specific recommendations to the Deputy Minister of Infrastructure concerning:

  - Properties to be retained – with rationale outlined.
  - Properties recommended for surplus action – noting actions and costs necessary to implement those recommendations on a site-by-site basis.
  - Those properties that will require a detailed planning review before a recommendation can be finalized. An action plan including timelines should be provided for each property in this category for subsequent follow-up.

  It is recommended this report be submitted to the Deputy Minister of Infrastructure by March 31, 2001.

- Five Infrastructure-owned buildings were targeted for specific review. The following recommendations for future action on each were reviewed with the Management Committee of Infrastructure:

  - **50th Street Transportation Facility** – Infrastructure has a signed conditional offer to purchase. Closing date is June 29, 2001. A substantial non-refundable deposit is due for the end of November 2000.

  - **142nd Street Supply Centre** – Infrastructure to continue to work with Learning to further streamline the operations of the LRDC and to partner with the private sector where appropriate. Property Development is also to undertake a space review in the facility to identify underutilized space (if available) for possible other uses.

- **Eric Cormack Center** – Property Development to undertake a programming study for use in developing an accommodation plan for the Persons with Developmental Disabilities (PDD) Program that exists at the site, including a review of possible alternate sites, order of magnitude cost estimates, etc. Correspondence has been sent from the Deputy Minister of Infrastructure to the PDD Edmonton Board to initiate this process.

- **Bonaventure Shops** – following the relocation of Environment to the Westerra facility at Stony Plain, several warehouse requirements will be consolidated into the Bonaventure Shops Building, freeing up the following properties for disposition:

  - Surplus Sales Building on Fort Trail.
  - Forest Fire Depot near NAIT
  - Lambton Park

  Additionally, Infrastructure will move forward immediately to subdivide and sell existing vacant land at Bonaventure Shops that is not required for the new occupants.

- **Lambton Park** – this facility will be listed for sale following the relocation of Infrastructure's recycle program to Bonaventure Shops (likely late 2001). An existing two to three acres of vacant land has been listed for sale.

Environment-Owned Properties

- Only two of Environment's buildings are over 1,000 m^2. Both are fully occupied.

- Most Environment buildings are 200 m^2 – 300 m^2 in size, are fully occupied, and offer no significant opportunities for disposal.

3. Conclusion

Recommendations made in this report will be dealt with through the existing functional work units in Infrastructure, as follows:

- Property Development will report to the Deputy Minister of Infrastructure as to identified properties to be retained or recommended for surplus. Any surplus properties will be disposed of through established processes.

- Property and Supply Management will continue with the sale of surplus properties in accordance with Infrastructure's existing 2000 – 2003 Business Plan targets.